Hypnosis

P. Schilder
O. Kauders

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NERVOUS AND MENTAL DISEASE MONOGRAPH SERIES No. 46

HYPNOSIS

BY

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TRANSLATOR'S PREFACE

The presentation of this book to American and English readers is the result of a recent stay in Vienna, during which I had ample opportunity to observe and study the work of Professor Schilder and Dr. Kauders, at the Psychiatric Clinic.

The purpose of the book is not only to familiarize the general medical profession with the theory and practice of hypnotism, but also to present a full account of the present state of the subject as embodied both in the investigations of Professor Schilder and Dr. Kauders, as well as in those of other authorities, concerning brain function and biological reactions and their coincidence with the latest data accorded in the newer conceptions and researches of psychoanalysis.

Aside from any individual or critical opinion on the validity and foundational structure of the authors' theories and findings, one must also be impressed in reading this little book with their profound knowledge of and ready acquaintance with all the material involved in the subject at hand. Nor will it escape the reader that in spite of the authority with which their knowledge and ability permits them to speak the authors have presented their work and their expositions with due modesty and conservatism.

The translator has aimed throughout at keeping the text as far as possible in its original form. Where he has appended foot notes embodying observations of his own, intended to amplify statements in the text, he has marked them as his own in order that the reader may be aware that these notes do not constitute a portion of the German original.

TRANSLATOR.

FOREWORD

In my shorter work on hypnosis I made an attempt to conciliate the psychological and biological points of view in the treatment of this subject. This earlier attempt was based in part on the investigations of psychoanalysis, in part also on observations involved in a study of encephalitis epidemica. I have made repeated efforts myself to provide new material. Kauders and Heilig, as well as Hoff, have reported new findings in the Vienna Clinic. Much additional new material has also been made available by others; I shall mention here only the work of Heyer. The compilation made by O. Schwarz, entitled *Psychogenese und Psychotherapie körperlicher Symptome,* affords a very good idea of the achievements of the last few years. The theory of the midbrain and its functions, first expounded by Aschner, has been rendered more profound by the investigations of Leschke, Müller, F. H. Lewy and Dresel, with the result that a biologico-physiological consideration of psychic processes is steadily gaining ground. Any profoundly conceived biological study of such problems must in the last analysis harmonize with the results of a psychological point of view. Kauders and I have therefore felt impelled to present in greater detail the points of view suggested in our earlier work, above mentioned, the more since our theoretical considerations have stood the test of practice, thus permitting us to hope that the points of view assumed by us may be of interest also to physicians. We have accordingly formulated our exposition in a sort of textbook, omitting excessive dwelling on details. In our citations from the literature of the subject we have as a rule given preference to such works as presented chiefly biological and physiological facts. The psychoanalytic treatment of the problems presented is the work of the undersigned alone.

Paul Schilder.

I.

The Phenomenology of Hypnosis.

I hold a key before the eyes of a person lying in a recumbent position, and command him to fix his gaze on the key continuously. Simultaneously, I repeatedly and gently stroke his brow, pronouncing again and again in a rather monotonous manner sentences to the effect that he is getting tired, drowsy, sleepy, that he feels a heaviness in his limbs, that he has the sensation of being about to go to sleep, that it is only with difficulty that he succeeds in keeping his eyes open, that he cannot help closing them. In the case of some persons, the eyes will close as a result. In the case of others, it will be necessary to pronounce a definite instruction to close the eyes. The person experimented on is now recumbent like one sleeping. He barely moves, perhaps does not move at all. I now raise the person's arm gently and release it. The arm does not drop back flaccidly, nor remain in its position, but descends in slow degrees until it reaches the original position. I stroke the arm of the person experimented on and repeat in a convincing manner: "You feel that the arm that I am stroking has become warm." I stroke the other arm, simultaneously assuring the subject that the arm has lost all sensation. I prick the hand with a needle; the subject winces slightly. I again stroke the brow and say: "You can see a beautiful flower with perfect clearness." I now "wake" the person experimented on, by pronouncing the following formula: "When I have counted three, you will open your eyes and will feel perfectly sound, fresh, and bright; you will feel no dizziness, no headache." I count three; the subject opens his eyes promptly, and makes the following report: He has not been asleep, and has heard all my words. He has felt fatigue and a heaviness in the limbs, but might have opened his eyes and moved about, had he wished. He has felt the sensation of warmth, also the prick. He has not seen anything. He says he now feels a slight dizziness and a slight headache. This is the type of a very superficial hypnosis.

In other cases the outcome is the same, with the exception that the patient declares, after awaking, that she cannot remember what was said to her. On hearing the signal to wake up, she may take

time in opening her eyes, may glance about in surprise and rub her eyes. To be sure, although this is by no means a rule without its exceptions, such cases very frequently allow the hand that has been raised to drop back in a relaxed and inert manner, or to maintain the hand in a state of cataleptic stiffness in the position to which it has been raised. But has the subject executed the commands issued during the hypnosis or not? It is impossible to resort to questioning in this connection after the waking; questions are asked during the hypnotic procedure. We are given information as to the result of the suggestion by means of nods of the head or more or less subdued speech. We are here pointing out that type of hypnosis in which—in spite of a low degree of suggestibility and perhaps even a paucity of muscular phenomena—amnesia is nevertheless present as to the experiences during the hypnotic state.

In other cases serious muscular phenomena occupy the foreground. Those hypnotized present an extreme laxness of the muscles, or a stiffening of the whole body, catalepsy, although no verbal suggestion has been made to this effect. Sometimes catalepsy and muscular tension can be attained only by the use of suggestion. In spite of the presence of extensive muscular phenomena, suggestibility is not necessarily encountered in other fields; amnesia may be present or absent. During such hypnoses, there may also be inability to speak; not a word is pronounced, and this may in some cases result in a keen sense of fear.

Motor phenomena in the form of twitches, hysteriform tremors, even in the form of more or less pronounced hysterical attacks,[1] may also constitute the content or preliminary stage of hypnoses producing the impression of a profound sleep.

Hypnotized persons in a "deep sleep" must in many cases be addressed in a summary manner before it is possible to communicate with them again; one has the impression that it will be necessary to waken them at least partially. The voices of persons thus hypnotized at first sound hoarse, low, barely articulate, and do not become cleared until the conversation in hypnosis has continued for some time, gradually approaching the voice while awake. Complete relaxation of muscles is observable in such cases; it may as a rule—

[1]A patient who suffered from hysterical hiccoughing first broke out in a crying spell before falling asleep and accepting the suggestion that she relax and stop her hiccoughing. It seemed as though she was unwilling to give up her hysterical conversion act.—Trans.

but not always—be easily turned into catalepsy by the use of suggestion. Motionlessness is not always recorded. Those hypnotized may make disturbing movements with the entire body and with the extremities. Suggestions of warmth, anesthesia, suggestions of smell and taste are frequently accepted, but not always optical suggestions. The degree of optical suggestibility varies considerably in these cases. Spots, mists, clouds, colors, are more readily accepted than definitely outlined or personified optical images. Persons producing form outlines, frequently will produce only those that are agreeable to them, let us say, images of intimate friends, and refuse to accept hallucinations of indifferent objects, such as flowers, landscapes, etc. If the hallucination involves definitely outlined optical images, such as the flower, for instance, it is usually easy to induce the hypnotized person to reach out for the suggested object, as he might reach out for the real object. Hypnosis of the kind described above may, but need not necessarily, be followed by amnesia. The persons experimented on who do not have amnesia with regard to their experiences during the hypnosis, will communicate varying data on the reality of what was "seen, felt, experienced." Some will describe their experiences in such a way that they may hardly be called more than vivid perceptions, others describe them as seen images, others again give rise to hardly any doubts as to the reality of the objects beheld. In many cases, we are told by the subjects that the hallucinations were quite clear, in other words, actually present in consciousness, but were vague in outline and color, or seemed covered with a veil. The judgment of reality in these cases is to a great extent independent of the degree of corporeal concreteness. Even in cases in which the suggestions made during hypnosis were experienced only as conceptions, there may be a consciousness of the presence of suggested objects, while, in the case of a given observation, the subject does not necessarily believe in the presence of the objects. From patients having amnesias, similar data are obtained if the amnesia has been removed in any way. J. H. Schultz reports the formations of layers in hypnotic self-observation. At first, there appear in the field of vision of the hypnotized individual formless sensations of color, of light and dark, as in after-images. Only later does the optical experience become more definite, resolving itself into a much-stratified band of light, then assuming more rigid forms, and finally again dissolving into experiences of form and color without a tangible content.

In the case of some hypnotized persons it is possible to obtain

hallucinations in the field of all the senses, even when the eyes are open, while real bodies actually present may be rendered non-existent to the hypnotized subject. The latter will then not see persons who are in the same room, nor—when subjected to the appropriate hypnotic suggestion—will he observe objects actually present in the room (negative hallucination). The subject's behavior is then determined entirely by the objects suggested. To be sure, the hypnotized person must have some sort of knowledge of the negatively hallucinated objects, for he avoids obstacles and will direct his eyes—a fact of great interest—away from the negatively hallucinated objects. Many persons experimented on, when thoroughly questioned after the hypnosis, will nevertheless indicate that they have seen the negatively hallucinated object in some way, perhaps resembling a very indefinitely outlined visual impression in the remotest margin of the field of vision. One of the subjects observed by us, to whom the suggestion had been made—as a post-hypnotic instruction—not to see the hypnotizer for a certain period of time, reported after the lapse of this period that he had seen a human shape of vague outline but had not been able to identify it as the person of the hypnotizer in spite of much effort. Another such person who had received the same post-hypnotic instruction, reported that he had seen only a white spot instead of the face of the hypnotizer. In the acts which they perform within the area of falsified suggestion, some of the hypnotized persons produce the impression of being absent-minded to the point of staggering. They stand insecurely on their feet and sway about; they have a slightly glassy stare, are in danger of falling down; their movements are awkward and vague. Others, on the other hand, perform all actions and motions not differing essentially from those of ordinary life. In the former type, commands uttered are not fully grasped, while in the latter type the power of understanding seems close to that of ordinary life. Even in such complete stages of hypnosis, the subject will not necessarily fail to remember what was experienced during the hypnosis, although, to be sure, such inability may be brought about by command during the hypnosis.

This is our first example to show that commands issued during hypnosis may have effect even after the hypnosis. Post-hypnotic suggestions may logically be divided into two groups. The first group will include such commands as are reasonable from the standpoint of the hypnotized individual; let us say, therapeutic commands. The second group will include those commands which are unrea-

sonable—again from the standpoint of the hypnotized individual—which have no discoverable sense at all: such as the command to clap one's hands at a certain signal, or to knock at the door. Some of these commands are even contrary to reason and require the individual to perform acts that are in contradiction with the individual's sense of decency or of social custom, and may subject him to ridicule; thus, a lady may be asked to put on a hat belonging to another person, etc. Either the immediate execution of the post-hypnotic commands may be required, or they may be ordered carried out at a moment lying far beyond the period of hypnosis, even weeks or months later. Finally, the execution of a post-hypnotic command may be connected with a specific condition. For instance, the following may be suggested: "Whenever you hear the word morphine, you will feel ill." It may be said that post-hypnotic commands will in general be obeyed in any type of hypnosis if they are of the class of reasonable commands. Amnesia may of course support even the execution of reasonable commands. Unreasonable commands, it must be said, in general have no prospect of being carried out unless there is an amnesia which protects them from the criticism of a clear consciousness. But this is by no means a rule without an exception. Unreasonable acts may be obtained by the use of suggestion even when amnesia is not present. In general, post-hypnotic commands of the unreasonable variety are accepted only by such persons as evince advanced stages of suggestibility in other respects also. But we had occasion, only recently, to observe another case in which post-hypnotic commands were promptly executed although it was impossible to obtain optical suggestibility. Among these acts was the assumption of a marked gayety after a certain signal, a clapping of the hands, etc. Here again there seems to be no fixed law. On the other hand, even hypnotized subjects who may advance in the hypnotic state to the stage of negative hallucination very frequently will not carry out post-hypnotic suggestions (of the unreasonable kind). In the case of hypnotized individuals who have shown a state of dreamy abstraction during hypnosis, the post-hypnotic command will very often be carried out only incompletely. Thus, experiments have been made on persons of this type who, after having been ordered to clap their hands thrice each time they are asked how they are, will at once clap their hands on emerging from the hypnotic state. Obviously, their conception of the command uttered during hypnosis was an inadequate one. The most perfect execution of post-hypnotic commands may be expected from such hypnotized

persons as make the impression of being in full possession of their senses in spite of a high degree of suggestibility. Post-hypnotic indisposition is more pronounced in the case of the more complete degrees of hypnosis as a rule. But an exception must be made for those hypnotized persons who seem to be acting, during hypnosis, and in the world suggested to them, not much differently than in the waking state.

In our description of those subject to visual suggestibility, we have already mentioned that the hypnotized individual may have a will of his own with regard to the things he will consent to have suggested to him. There is no stage of hypnosis which requires that all signs of resistance be absent. A very frequent form of hypnosis is that in which the hypnotized person falls into a slumber which cuts off all relations between subject and hypnotizer. Other hypnotized persons, excellent subjects of visual suggestibility, will not awake on the given signal, but only after the use of more emphatic methods. It may almost be stated as a rule that the hypnotized person emerges with reluctance and resistance from the state of sleep. In extreme cases, hypnotized individuals cannot be awakened from their sleep for several days. Not infrequently the hypnotized individual will pass from hypnosis into a state in which he lives for his own interests alone, connection with the hypnotizer having been more or less completely broken, with a more or less definite consequence of a hysterical condition, which may—in unfavorably or awkwardly managed cases—last for days. We have seen a case in which, a few hours after one of the customary public demonstrations of hypnosis, in which the patient (a woman) had been used as a medium, there ensued—as an hysterical reaction to this condition of public hypnosis which had much affected the woman—a state of sleep lasting for twenty-four hours, during which it was impossible to wake her and which made it necessary to transfer her to the psychiatric clinic. We have already mentioned the fact that hysterical attacks may serve as the beginning of the hypnotic state, for even during an hysterical attack, the individual is expressing his own natural desires.[1] Even in the later course of profound hypnosis, hysterical attacks of the most varied forms may ensue.

The profounder the degree of the hypnosis, the easier the transi-

[1] In a recent case of hysterical blindness, in which I succeeded with the suggestion that she would be able to open her eyes and see, the recovery of sight was followed by a marked hysterical crying spell, the significance of which was revealed in later psychoanalysis.—Trans.

tion to phenomena in the domain of hysteria. Profoundly hypnotized persons who have full possession of their senses during hypnosis are here again the exception. The manner in which the profound hypnosis is brought about varies considerably. Sometimes the first few strokings are sufficient to bring about such a profound state of hypnosis. In other cases it will transpire after a number of stages, beginning with a more superficial hypnosis. Sometimes a profound hypnotic state will not result until repeated attempts have been made in the same seance, sometimes only after a lapse of several days, and after a number of hypnotic seances. The degree of susceptibility to profound hypnosis customarily increases when the hypnosis is repeated. Furthermore, the consciousness becomes clearer in the later profounder hypnosis, until finally, after repeated hypnoses, the condition is attained in which the trained medium will carry out even the most idiotic orders. But it must, of course, be admitted, that the process of training has no direct connection with the hypnosis as such. We are here concerned with transition stages approaching the state of waking suggestion. For all the phenomena of an enhanced suggestibility may be retained, independently of the condition of sleep, and independently of all the phenomena of fatigue, dizziness, etc.

It becomes apparent how large a variety of possibilities exists with regard to the phenomenology of hypnosis. A systematic distribution of the various degrees of hypnosis is therefore precluded by the nature of the case. Forel distinguishes the following types: 1. *Somnolence.* The subject may, by the exertion of a certain amount of energy, resist the suggestion and open his eyes. 2. *Light slumber* or *hypotaxis,* or *charme.* The subject can no longer open his eyes, and is in fact obliged to comply with some of the suggestions or all the suggestions excepting amnesia. He does not become amnesic. 3. *Profound sleep,* or *somnambulism,* characterized by amnesia after awaking, and by post-hypnotic phenomena. (This distribution, like all others, is by no means adequate to the wealth of phenomena involved, but will suffice for a superficial orientation.)

II

The Effects of Hypnosis.

We have described the alterations produced by hypnosis in the perceptive and conceptive activity of the individual and have shown how will and actions are influenced by hypnosis. This by no means exhausts the effects of hypnosis, as is apparent if only from the fact that even the apparatus of motion presents alterations which cannot—in our description—be regarded as direct consequences of a suggestively produced idea or feeling. Furthermore, in the course of the hypnosis, a state ensues which we must consider as in many ways resembling sleep. The beginning of profound hypnosis, as well as profound sleep in general, is not characterized by any increase in blood pressure after the injection of adrenalin, according to Heilig and Hoff (data as yet unpublished). A "vagotonic" reaction here takes the place of the normal adrenalin reaction.

Alterations of the body take place in hypnosis, and these alterations are not subject to the individual's direct caprice, in other words, they are alterations in the vasovegetative system, in the widest sense of the term. With regard to the effect of hypnosis on these "bodily systems" we must distinguish between two possible effects: (1) Those effects ensuing upon the beginning of hypnosis, without any suggestion of ideas; to this class belong the muscular rigidity and catalepsy on the part of subjects who have not had such conditions expressly suggested to them; (2) those effects on the vasovegetative system that are the result of an idea, and that have therefore been, in the narrower sense of the word, suggested.

In general, little is known concerning the direct, nonsuggestive effect of hypnosis.[1] Some authors, for instance, Kronfeld and Friedrichs, even deny all nonsuggestive phenomena in hypnosis. But very probably the effects experienced in hypnosis work directly upon the vasovegetative system.[2] However we shall dwell in more detail

[1] One patient of mine on whom hypnosis was attempted, told me later of the fears he had in being hypnotized and the effect that it had on him caused him to wake up after he had already been asleep.—Trans.

[2] The effects experienced in hypnosis may result from unconscious resistances against being hypnotized upon the vasovegetative system.—Trans.

on the suggestive effects in hypnosis. The following conditions may be obtained by appropriate suggestions:

1. *In the transversely striated muscles.* Muscular relaxation, muscular rigidity, muscular tremors, may be suggested. Muscular relaxation may be quite pronounced even in persons who have not fallen asleep. Tensions may be of various kinds. We are dealing either with a catalepsy in the narrower sense, *i.e.,* the part moved remains in any position assigned to it, but with the minimum of muscular tension required for a retention of the position. But we occasionally observe tensions which are far more marked. In some cases, not even those positions that have been passively assumed are retained, and there is a tendency toward overextension. Even though the statements of Fröhlich and Meyer, to the effect that action streams are lacking in cataleptic tension, have been refuted by the investigations of Rehn and DeJongh, and though it has been proved that tetanic innervation streams are running down even during the cataleptic innervation, as in a voluntary muscular contraction, it must not be forgotten that the cross-striated muscle has the sympathetic-parasympathic innervation as well as its cerebral-spinal innervation. We may state this in other words by saying that every cross-striated muscle also includes a smooth muscle. There may be a difference of opinion in specific cases as to what part of the muscular functions is due to the sympathetic parasympathically innervated section (compare F. H. Lewy's data on this point). But this phase of the matter may not be overlooked either in tremors nor in a relaxation of muscles due to fright.[1] We may even go so far as to emphasize a further point in these discussions, namely, that "the affective-vegetative" factor is not equally present to the same degree in the various cross-striated muscles. Doubtless there are muscles which serve the function of expression and the feelings in a far higher measure than others. The muscles of the eye are of this class, and we again point out that in negative hallucination the hypnotized individual ordinarily looks away from the hallucinated objects. It will be necessary to ask whether the specific predilection for the muscles of the jaw and neck, in the case of the negativistic tension of dementia precox patients may not be explained by similar factors. Similar considerations must be raised in connection with the *arc de cercle*[2] of hysterical individuals. It may be objected, in

[1] Grafe and Traumann have shown that hypnotic rigidity of muscle stimulates metabolism less than voluntary contraction.

[2] Opisthotonos.

opposition to this attitude, that the specific behavior of the above named groups of muscles is conditioned by psychological reasons. We take the liberty to anticipate the fundamental idea of our study to the extent of emphasizing that a specific psychic attitude certainly must have its specific cerebral-physiological concomitant.

2. The innervation of the heart and of the vessels depends very much, of course, on the emotions. Much has been said about the bodily expression and bodily effects of feeling, and not always with reason, for there are no feelings that are not related with some conceptual, perceptual, or ideological content or other. It would therefore be more reasonable to speak of the bodily effect of the emotions. All the effects which may be produced by the operation of the emotions may also be called forth by the operation of suggested emotions; for instance, accelerations and retardations of the number of heart beats may be produced as the result of suggested emotions. Astruch succeeded in depressing the frequency of the pulse in hypnosis to thirty beats per minute. He even obtained heart fibrillations, but Braun declares that this observation is not free from criticism from the methodological side. There is no doubt that a sudden emotion may produce death in the case of persons suffering from heart trouble.[1] The line of demarcation between health and disease is by no means a sharp one, and in the case of primitive persons sudden deaths due to fright are said to have been observed (compare Braun's data on this subject). These points are adduced merely to visualize the powerful effect of the emotions on the heart. When I suggest *anger* I never suggest this feeling alone, but must always suggest a content of reproduction or of conception together with the idea. In fact, in general, much better results will be obtained in suggestions of this type by emphasizing the content and not the feeling or the emotion as such. It is easy in general to suggest a quickening of the pulse because it is easier to select key conceptions of a terrifying and fearsome kind, such as would naturally produce an accelerated pulse, than to fix upon key conceptions with a concomitant retardation of the pulse. This attitude simultanously furnishes us with the general formulation that every conception, every perception, every idea, has its appropriate vasovegetative consequences, and that

[1] The effect of emotion on the heart was illustrated in a patient who swooned and vomited when seeing another patient being pricked in the neck with a needle and anticipating the same procedure upon herself.—Trans.

in order to attain a certain result within the vasovegetative system it is necessary to ascertain the content of the corresponding conception. This fact makes it possible for us also to determine the difference between a desired event in the vasovegetative system and an act of caprice. In a capricious act I have, in addition to the conceptual, perceptual, or ideologic aspect of the action, also an express intention with regard to my motion, my innervation. If I desire an acceleration of my heart beat, I can attain it by visualizing a terrifying conception. The acceleration of the heart beat will then follow without any specific concentration on the cardiac muscle. I am aware of the relation between a terrifying conception and an acceleration of the pulse only because of purely intellectual considerations and not because of any specific *intention* directed to the cardiac muscle. We have formulated the matter thus only with respect to the cardiac muscle, but the same holds good of all the organs of vasovegetative innervation. We may apply it, for instance, to the so-called voluntary alteration of the diameter of the pupil as a result of the idea of light and dark. With regard to the effect of the emotions on the vascular system, we may refer to the presentation of the subject to be found in the *Medizinische Psychologie* by one of the present authors. It is a well known fact that every emotion involves dislocations of the blood which may be represented plethysmographically. While it was formerly assumed that the volume curve of the arm varies with the presence of either pleasure or pain, recent investigations (Küppers, DeJongh, Weinberg) show that the volume curve for pleasure is identical with that for pain, and that it serves in this connection only as an expression of the presence of psychical activity as such. To be sure, the presence of psychical tension does customarily express itself also in the volume curve. The investigations of Weber afford information concerning the dislocation of the blood in the various parts of the human body. There is no doubt, at any rate, that the volume curve reacts most sensitively to fluctuation of the feelings, although the capacity for the expression of these fluctuations may be limited. The dislocation of the blood in the extremities, in the region of the head and in the abdominal organs, is not identical. Alterations of blood pressure accompanying psychical activity are explained by Bickel as due to changes in the activity of the heart and not to the vascular system. The suggestions of "warmth," "cold," in hypnosis, may have a considerable influence on the vascular system. Forel, Heller, and Schultz, as well as Alrutz, have succeeded in calling forth blisters, as from a burn or

scald, by making a corresponding suggestion. Of course, it is not certain that the attainment of these blisters is to be explained only as an effect on the vascular system. Direct trophic effects must not be overlooked. The importance of the effects of emotions and suggested emotions on the vascular system cannot be overestimated when we remember that every organ of the body is supplied with blood vessels and that the most remote regions of the body are therefore accessible to suggestion by way of the vascular system. To be sure, we have also to consider, in addition to the influence of suggestion on the vascular system, other effects, concerned with the quite differently constituted smooth muscular tissue, the glands, and the trophic functions.

3. Since Pavlov's brilliant studies, there has been no doubt of the great influence of the emotions on the intestinal tract. The functions of the salivary glands, as well as the secretion of the gastric juices, may be influenced psychically, not only in general, but the secretion of gastric juices is adapted in its quality to the food stuffs that are fixated. Bickel showed that the secretion of gastric juices in a dog ceased when he was shown a cat. We must therefore point out as a principle that the effect of the emotions on the digestive glands is of two-fold nature. On the one hand, emotions may operate as a stimulus or as an inhibition of the secretion of the gastric juices. This secretion is therefore an expression of the general emotional state of the individual; on the other hand, the secretion of gastric juices is stimulated in a definite direction by specific psychical contents. Investigations by Heyer, Schrottenbach, Langheinrich, Heilig, and Hoff have shown that the results thus obtained in experiments on animals are also valid for man. While Schrottenbach studied the influence of the emotions as such, the other authorities are concerned with the effect of the conceptions (perceptions) and emotions produced in hypnosis on the secretion of gastric juices in an empty stomach, and also on secretion after the consumption of food. Langheinrich has investigated the effects of conceptions of hypnotic origin on the secretion of bile. Not only the secretion of the intestinal tract, but also its motility, is dependent in great measure on psychical factors, as may be shown by the most ordinary daily experience. Cannon showed that intestinal peristalsis of a cat ceased when her young were taken away. Heyer eliminated abdominal atonies in man by means of suggestion. Forel and others have repeatedly overcome constipation by means of suggestion.

Diarrheas may be brought about by emotions and by suggested emotions.

4. The skin may be influenced by suggestion, in the first place, by an alteration in the local circulation. But in the production of the scald blisters by hypnotic suggestion we are also dealing, probably, with a direct trophic influence. This is the same trophic influence to which must be ascribed a sudden turning gray of the hair after a violent shock or fright. We must, for the rest, refer to the experiments of Kreibich and the observations of Bunnerman and Stern.

5. An influencing of the sexual organs by psychic means is of great importance even in the normal functioning of these organs.

The orgasm in man as in woman is accompanied by extensive somatic phenomena, phenomena both of vasomotor and secretory variety, in which movements of the smooth and cross-striated muscles play an important part. Secretory anomalies such as leucorrhea and menstrual difficulties have been overcome by gynecologists by means of suggestive therapy. In this connection we must also point out the data of Forel, who reports a permanent influence on menstruation by means of hypnosis. (*Cf.* also the article by Mayer in O. Schwartz's book on the psychogenesis of organic symptoms.)

6. We shall merely refer in passing to the susceptibility to hypnosis, of respiration, of the pupil, and of the genito-urinary system, concerning which little specific information is available.

Experiments by Heilig and Hoff which have not yet been published show the effects of suggestion of pleasure or of pleasurable sensations upon the secretion of urine and the retention of sodium chloride. Anxiety and shock, increase the volume of urine, with a lower sodium chloride content. According to the view of these scholars, the secretion of the kidneys may be hypnotically influenced, but they do not attempt to solve the question of whether this is an effect of an altered supply of blood to the blood vessels or of an effect on the tissues, or—what is most probable—an effect on both at once. It has long been known that the volume of urine may be increased and suppressed by suggestion.

7. It is an important fact that the glands of internal secretions may be influenced by suggestion. To be sure, as we well know, this is not true of directly suggested effects, but of the effects of the emotions, which are in turn, however, produced by suggestion. Thus, according to Cannon, the quantity of adrenalin in the venous blood is

lowered if the animal is suddenly terrified. Clinical experiences make it very probable that the emotions have an influence on the thyroid gland[1] in the direction of a change to the Basedow condition (Kohts). The fact that the sugar contents are changed in depressive affects, and that hyperglycemia and glycosuria may ensue, has been made certain by the investigations of Raimon and Knauer and Schultze. But no material exists—as far as we know—concerning the influence of hypnotic suggestion on the glands of internal secretion.

8. Eichelberg succeeded in producing fever by suggestion. Grafe has shown in experiments on metabolism that the basic metabolism may suffer a number of very considerable changes under the influence of suggested emotions. Glaser has altered the calcium index of the blood by means of suggestion, but of course we have yet to see whether the alteration of the calcium index of the blood is not a secondary consequence of an alteration in respiration, for forced respiration (compare Adlersberg and Porges on this point) produces changes in the calcium content of the blood. We refer the reader to the fact of neurotic respiratory tetany with its alteration of the calcium content of the blood, which has been given due attention by the above named authors. We may also make here the general remark that the directly suggested conceptions and affects may give rise indirectly to effects on the body. Thus, for instance, in the case of respiratory tetany, which may thus originate psychogenically. In this manner even a suggested contracture might call forth secondary changes in the musculature. If I suggest to a person that it will be necessary for him to turn about ten times on his own axis, the simple issuance of the command will produce nystagmus as well as the other changes naturally involved in a revolution on one's own axis.

9. The fact that conceptions during hypnosis may rise to the stage of actual perceptions has already been repeatedly mentioned by us. This change must be a consequence of some effects on the cerebral process itself. These effects must partially have been shunted over the path of the affectivity, a remark which we beg to emphasize at this early stage for theoretical reasons. Bauer and Schilder succeeded in producing past pointing in a person experimented on—by

[1] I have for many years studied the psychogenic causes of Basedow's disease, and have been able to influence their recovery by suggesting the elimination in their lives of such psychic factors. One case of exophthalmic goiter was recovering nicely and her goiter disappearing when she was told of the syphilitic infection of her fiancé. This shock caused complete recurrence of symptoms.—Trans.

means of the suggestion that the objects in the environment were rapidly revolving around him and making him very dizzy. In many ways this past pointing resembled a similar past pointing ensuing upon vestibular excitation. To be sure, nystagmus was absent. They have interpreted this phenomenon by assuming a direct influence on cerebellar excitation. P. Löwy explains these phenomena as due to a change in the conception of direction, but in an essay written together with Leidler he points out that the forms of dizziness in neurotics correspond precisely with the experiences of dizziness in vestibular lesions. These authors also resort to an intermediary action of the blood vessels in their explanation. We should ourselves prefer, on the contrary, to retain our conception of the possibility of influencing directly the vestibulo-cerebellar functions by means of suggestion. It is clear here also, as well as in the case of the power of suggestive hallucination, that the cerebral mechanism as such may be influenced by the path of suggestion.

10. This question may be answered even more definitely if we recall sleep and the possibility of influencing it by means of hypnosis. In giving more detailed treatment of this example, we are actuated by the consideration that sleep is of fundamental importance in the theory of hypnosis. The fact that sleep may be produced by suggestion through hypnosis is beyond dispute. The identity of the sleep produced by hypnosis and spontaneous sleep is evident also from a number of more specific traits. The eyes of a hypnotized man, as well as those of a man going to sleep, will close as a result of the feeling of fatigue. He may open them once or twice before sleep finally comes. A person falling asleep frequently contracts convulsively, sometimes with the sensation of falling. Slight motor muscular disturbances are not unusual. Obviously, we are describing releases of subcortical motor mechanisms from the cortical restraint. This assumption is supported, for instance, by the case of Haenel and Bielschowsky, in which a myoclonia ensued as the patient was about to fall asleep. The post-mortem examination showed a grave alteration in the Purkinje cells of the cerebellum. We are not in a position to state that the sensation of falling which a person falling asleep occasionally experiences together with his sudden twitch also includes vestibular components, nor have we been able to observe any such thing in hypnotized persons as yet. We have already pointed out the similarity of the adrenalin values in natural and suggested sleep.

In hypnosis, as well as in sleep, the pupils are frequently con-

tracted; to be sure, the contraction of the pupil is not universal in hypnosis; there is a frequent alteration in the diameter of the pupil (see Moll). Sleep of hypnotic origin and natural sleep must not be distinguished in any way in their form or in their regular course. The sleeper who enters the state by hypnosis is also very reluctant to leave it. After awakening, he rubs his eyes, looks around, and may even present that short phase of blankness which occasionally marks the transition between profound slumber and awakening. Concerning the physiology of sleep we have excellent data, thanks to the investigations of v. Economo, who based his studies on Trömner and Mautner. There is no doubt that in the vicinity of the third ventricle there is a relatively circumscribed region that is of great importance in the genesis of sleep. For the sake of brevity we shall call it a sleep center. V. Economo made these observations in connection with his well known investigations concerning *encephalitis lethargica,* also refuting the view that an interruption in the conductivity produces the disturbance of sleep in *encephalitis lethargica.* In one form of this disease, usually when accompanying infiltrations in the region of the third ventricle, there is in the acute stage a well known pronounced tendency to sleep. Hoff and Kauders[1] (unpublished experiments), proceeding from the investigations of v. Economo, produced a chronic experimental medinal intoxication in dogs, with persistent conditions of sleep, and were able to find in the brains of the animals experimented on not only serious changes of ganglionic cells in the inferior olive, but also extensive ganglionic processes of degeneration in the central gray matter surrounding the *aqueductus Sylvii,* and also in the infundibular region. Even more instructive are the hyperkinetic forms of encephalitis, which usually ensue in the form of a serious insomnia. Precisely these hyperkinetic initial stages of encephalitis are furthermore, as one of us (Kauders) has already pointed out, often capable of being alleviated of its motor symptoms[2] by means of hypnosis, even yielding to a tem-

[1] I have been privileged to see the slides of v. Economo and those of Kauders whose experiments on dogs corroborate the findings of v. Economo. I found them very convincing.—Trans.

[2] Similar results were obtained by me in myoclonic cases of encephalitis in which hypnotism was used. I was in doubt often whether these symptoms were not merely hysterical and I was often corroborated in my opinion when the symptoms yielded to hypnosis. Kauders pointed out to me the error of differentiating with the use of hypnotism instead of recognizing its influence on both conditions.—Trans.

porary condition of sleep. This is a further evidence of the already mentioned direct influence of suggestion on cerebral mechanisms, if we may assume that as early as in the hyperkinetic stage a certain irritation of the subcortical sleep centers exists, owing to the process of infection, and which is further exaggerated by the serious phenomena of motor affections; this irritation becomes quite manifest in the subsequent lethargic stage. This stage is characterized by a stubborn tendency to sleep, which may under certain circumstances be operative only by day, while the patient is restless and unable to sleep at night. V. Economo speaks of a shifting of the natural divisions of time. This author has also refuted the view that is occasionally set forth to the effect that disturbances of sleep in encephalitis are connected with the pituitary body. The facts communicated permit us to assume with certainty that there is a sleeping mechanism located in the vicinity of the third ventricle (*cf.* also Leyser), which in encephalitic cases is sometimes in a condition of overexcitability and overfunctioning and at other times of underexcitability and underfunctioning. Furthermore, there are also conditions of functional disturbances. Cases like those of Luksch and Pette, in which a lesion of the brain localized at the junction of the third ventricle at the *aqueductus Sylvii* indicates a specific function in determining sleep, are of great importance. Forel has explained in detail that the setting in motion of the mechanism of sleep—when one falls asleep—is, in natural sleep, determined by the desire to sleep, the psychology of which will take up a good deal of our attention in the sequel. In hypnosis the desire to sleep is produced by suggestion, or, in other words, the psychic effects of hypnosis set the sleep mechanism in motion. We have thus furnished evidence that a cerebral mechanism located in the vicinity of the third ventricle may be influenced by psychic means. But are we not concerned here with something quite similar to the other effects of hypnosis on vasovegetative systems? We prefer not to give a more detailed proof for our affirmative answer to this question until we have gone more thoroughly into the psychology of the sleeper and of the hypnotic subject.

III

Sleep and Hypnosis

A person falling asleep has the sleep wish. If this sleep wish experiences internal resistance, either because of emotions from the field of normal life, perhaps mourning, anxiety, etc., or by reason of neurotic adjustments, sleep will not ensue, regardless of whether the individual desires to be sleepless or not. We must distinguish between a clearly conscious sleep wish and an instinctive sleep wish. Obviously, the latter is the determining element. The sleep wish may have its way even against an active decision to remain awake. The objection may be raised that the instinctive sleep wish is not approachable psychologically and is merely an organic phenomenon. As opposed to this formulation, we must adhere to the psychological character of the instinctive sleep wish, together with Forel. No doubt the relations of this desire to the bodily state are obvious. The feeling of fatigue before going to sleep is closely connected with metabolic phenomena and with fatigue substances. In fact, the sleep wish may—and not without reason—be considered as the indicator of a specific bodily process.[1] This formulation is not intended to reduce in any way the significance of the psychologically approachable nature of the sleep wish. We must imagine that every psychic phenomenon has energies at its disposal which originate in the common reservoir of the body; energies which are in constant interaction with purely bodily processes. One of the present authors has attempted to outline these matters more definitely with the aid of the conception of the effect-value. The effect-value of the instinctive sleep wish is therefore determined also by bodily factors. Even the conscious sleep wish also has an effect value; it may, furthermore, depend for support on the instinctive sleep wish. The psychology of soporifics in their relation to the sleep wish has not yet been investigated. Does the soporific potion reinforce the instinctive sleep wish, or does it merely make the purely physical apparatus more responsive? In the case of *encephalitis lethargica,* is it the sleep wish that has been changed, or has the sleep mechanism, in its extra-

[1] See v. Economo: Die Pathologie des Schlafes.

psychic phase, been altered in its responsiveness? In fact, may we distinguish at all—psychologically speaking—between these things? At any rate, we must begin by distinguishing between them conceptually. We must, in any case, distinguish between the psychic agent, a sleep wish, and the sleep mechanism, and we have every reason to assume that the sleep effect may vary though the sleep wish remain the same. To make the matter more clear, we may recall that even very suggestible persons, who seem to offer no doubt of their psychic surrender, do not develop scald blisters in response to the corresponding suggestion, obviously for the reason that the vasovegetative mechanism is not, from a psychic standpoint, responsive enough in their case.

The sleeper is not completely asleep. According to Landauer's excellent expression, " sleep vigils " have been posted, which remain attentively on guard over the situation and see to it that no mishap befalls the sleeper. Nor may we say that the awaking of a sleeper by the use of a stimulus means that a stimulus of a certain intensity will interrupt sleep, but rather that the vigilant ego, the sleep vigil, is observing all stimuli to determine whether it might not be desirable to abandon the state of sleep. In this sense it is not the intensity of the stimulus that is the determining factor, but the adjustment to stimuli, or rather to the event that is transpiring. The well known examples for this situation are: the mother, who will awake only when her child cries; the miller, who wakes up when his mill ceases its noise (*cf.* also Forel). An apparent contradiction to this position is afforded by the results of experiments at waking, which present certain regularities in the degree of wakeability by a certain stimulus in the various stages of sleep. The same stimulus, qualitatively, will not result in a waking until reinforced up to a certain point to let us note that an amplified sensation of sound is—for the individual—a biologically entirely different thing from a feeble sensation of sound, and furthermore that the biological significance of a waking stimulus differs with the hour of the night in which it is applied. In other words, the sleep curves have, in addition to their merely bodily significance, also a psychological significance, which can be best understood by assuming that the individual faces certain unified situations which he deals with through his sleep vigil. This would be equivalent to an entirely new use of our biological mode of considering the question, according to which the physical and the psychical are by no means opposites. One phenomenon particularly requires our attention in a consideration of sleep; namely, the precise time sense of

the sleeper enabling him to wake up at a definite time.[1] This time sense is more accurate than the corresponding sense in the individual awake. It would be difficult to assign a psychological reason for this phenomenon. Obviously the resolution taken by day continues effective during sleep, or, in other words, the estimating of time is a task of the sleep vigils. The fact that this task may be carried out with such precision is obviously connected with the fact that the sleep vigil is by no means to be identified with the fully developed waking ego, but has only subordinate tasks to perform, which may accordingly be executed with the greater precision. It should be noted even at this early stage of our book that a better estimate of time is made even during hypnotic sleep. Ehenwald has summarized the observations of Bleuler and Forel in this connection, and has also made new experiments. He believes that through the alternation of the contents of consciousness with that of the affects is made possible a discrimination of those alternations which become accessible to realization owing to the dulling of consciousness in sleep and in hypnosis. That section of the personality which is asleep (a sleep ego) clings vigorously and tenaciously to sleep and offers resistance to being awakened, as is well known.

But the assumptions made thus far by no means exhaust the psychology of the sleeper. As is well known, the sleeper dreams, and in his dreams infantile strivings of primitive personality make themselves felt. We call attention, in this connection, to Freud's interpretation of dreams. The dream contents may be of various stages of differentiation. The dream contents are an expression of Freud's work on the mechanism of the unconscious. The various conceptions are fused together, dislocations and condensations take place, the sum of energy of one conception is transferred to another, chronological sequence is not observed, external reality is replaced by internal reality, all of which are processes which we cannot study specifically at this moment, and concerning which we refer to Freud (*cf.* also short account by one of the present authors in his *Medizinische Psychologie*). We sometimes encounter dreams which in their structure correspond rather to the psychic mechanism of what was previously in consciousness, preconscious or foreconscious, *i.e.,* they present in more emphatic form the mode of activity of the mechanism of the everyday thought, with the difference that these

[1] As is well known, this time sense is not always—or in all persons—precise. But the proved existence of cases of this kind are of great importance theoretically.

sequences of thought are cut off from consciousness. As a rule, the motility of the sleeper is precluded. But in some cases, particularly in the above mentioned dreams of the foreconsciousness type, motility seems quite accessible and we then are provided with such cases in which the sleepers talk in their sleep and carry out more or less complicated actions. In other words, the dream state approaches the state of somnambulism. We are therefore led to the following crude division in the case of the sleeper: the waking ego, the sleep ego, and the dream ego; in the latter we may distinguish between an unconscious and a foreconscious dream ego. The foreconscious dream ego merges imperceptibly with the sleeper's waking ego. But this presentation should not lead one to forget that all these varied manifestations of the ego are ultimately connected and that the total personality is in the background, even behind the dream and the sleep vigils, retaining in some manner its general goals and measuring the sleep and the dream by the criteria of these ends. There remains at least a corner of our soul[1] which knows that we are sleeping and dreaming.

It is possible to secure contact with any good sleeper during the progress of his sleep. Poor sleepers will wake up if they at all register the call. In other words, we may secure communication with the sleep vigil; but it should be noted that the sleeper's attitude toward the person addressing him in his sleep is similar to that of the hypnotized person to the hypnotizer. He will receive orders and usually has amnesia with regard to the conversation; also he will carry out post-hypnotic orders. We must therefore assume a close connection between sleep and hypnosis from this point of view as well. If we think out the problems of the sleep vigil we are again brought to the conclusion that the sleep vigil cannot correspond fully to the course of thought by day. It has at its disposal a better estimate of time; it accepts commands with less resistance than does the waking personality. Speeches, and the experiences of the sleep vigil are frequently subject to amnesia. It might even be assumed that the sleep vigil is not to be considered, psychologically, as a complete unit, and that the sleep vigil which receives the commands may not be identical with the vigil which takes care of the mechanism of waking, and it is very probable that this assumption is not entirely erroneous.

If I put a person to sleep by hypnosis, I am producing in him all

[1] Soul might be translated as psyche, the original being Seele.—Trans.

those psychic transformations that are found also in the sleeper. In general, the spontaneous dreaming of the hypnotized individual is not very prolific; but there is still lack of more detailed investigations on this point. There is no doubt that external stimuli and suggested conceptions are subject in hypnosis to dislocation and condensation.

One of the present authors induced a hallucination of a tree in hypnosis and then introduced a vestibular stimulus. Both impressions were fused together in such manner that the patient (a woman) cried out that the tree was being cut down. An observation communicated by Moll is very instructive: Moll blew a bellows at the side of a hypnotized person, but did not say a word. The hypnotized person believed he heard the noise of a locomotive. There ensued a complete dream concerning a railroad train. Whenever Moll drummed with his finger nails on the table the hypnotized person would dream of a military body with a drum and saw soldiers. We are here dealing with a spontaneous performance of the dream ego of the hypnotized person, independently of the will of the hypnotizer. The mechanism of this process is similar to that observed when the hypnotized person begins to operate independently on a suggested simple visual hallucination, producing hallucinations of plastic visual scenes that are no longer connected with the initial hallucination. There is no doubt that dreams may be suggested in hypnosis. We have no reason for doubting there is no identity between suggested and spontaneous dreams. On the whole, the dream phenomena within the hypnosis probably occupy a rather slight place. What is present in the hypnosis in the way of experience is frequently of a different character merely permitting the dream dislocations and condensations to gleam through. This is true of any hypnosis, including hypnosis in which visual hallucinations may be secured. The experiences as a rule follow the suggestions clearly and distinctly, in so far as we are not dealing with hypnoses in which the individual is living in accordance with his own desires. But even then the images and experiences that ensue are characterized by that relatively clear formulation that may be observed, let us say, in the experiences of the hysterical state, or, to put the matter more precisely, they have the mode of appearance of what was formerly in consciousness. To be sure, the hypnotized person who is induced to act in the somnambulist state has an appearance of dreamy abstraction; he produces the impression of being a person more familiar with the dreaming state than others, though otherwise everything may be in order. He acts as a sleeper would act, with whom one has

entered into closer contact, in tangible proximity to the dream experience. It is in this stratum that the transference with the hypnotizer takes place. It may be said that we are dealing essentially with a contact with the sleep vigil, concerning whose psychological character we have already reported above. In the contact with the sleeper it may be observed that it is possible to strengthen this relation with the sleep vigil more and more at the expense of those sections of the personality which are sleeping and dreaming. In fact, even in normal sleep, fluctuations between the degree of participation of the sleep vigil and the sleep ego are constantly taking place. The morning slumber becomes more restless, *i.e.*, the reaction to the environment is enhanced. When in rapport with sleeping persons, we have the impression that the sleep becomes lighter and lighter as the contact becomes more complete. Also, the remarks of the sleeper, paralleled with his process of waking, become more orderly, or, to express the matter in psychoanalytic terms, the elements of the Ubw[1] system fall more and more into the background as compared with the elements of the Vbw[2] system, which latter tends more and more to coincide in its qualities with the Bw[3] system. Even in profound hypnosis we have the impression that as the patient becomes more tractible, as he grasps more readily, the more does the dream character of the situation disappear and the state of the consciousness approach more and more the state of consciousness in ordinary life. The terminal point of such a series is given in the waking suggestion, in which the deviations from the state of consciousness in the normal state have become quite insignificant. To be sure, the foregoing description of the state of consciousness of a hypnotized person is inadequate inasmuch as we have not sufficiently emphasized the fact that there remains standing behind all these psychic complications a total personality, which exercises its control on the one hand over the condition of the sleep ego, on the other hand over the condition of the dream ego, and finally also over the sleep vigil with all its relations, including, therefore, also the relation of suggestability. Precisely this is the problem which is to have our attention in the next chapter. For the present, however, we must still dwell on the process of waking out of sleep and hypnosis. Waking from sleep may be a gentle and gradual process. Obviously, beginning with a certain stage of sleep, the sleep vigils are reinforced, and these,

[1] Unconscious mind.
[2] Preconscious or foreconscious mind.
[3] Conscious mind.

responding to some insignificant alteration in the situation, waken the individual. If a sound sleeper is suddenly awakened he will frequently react—as has been already mentioned—with a short phase of blankness, followed by headache and dizziness. The case is similar with the hypnotic sleeper. A suggested sleep may be permitted to run its own course until the patient awakes of his own accord. The patient may be wakened slowly or suddenly. Sudden waking is as a rule accompanied by a more or less serious headache, which is obviously the reaction to an oversudden psychic adjustment and must be taken seriously, since it is due to real changes either in the blood vessels or in other innervation areas.

There is no doubt, therefore, that there is a suggested sleep, namely, the sleep of hypnosis, and many of the phenomena of hypnosis can only be explained with the aid of the psychology of sleep.

It is frequently asked whether persons may be hypnotized against their own will. We may dispose of these questions by referring to the sleep wish. It is the instinctive, not the conscious sleep wish, that is the determining factor. To be sure, the conscious wish may intervene to retard or accelerate the work of hypnotization, but in the long run the latter depends on the instinctive readiness for hypnosis. Similarly, it is impossible, by the use of the will alone, either to force sleep to come or prevent it from coming.[1] Precisely in hypnosis, it is frequently observed that an urgent instinctive desire for hypnosis is concealed under a superficial resistance, and that an eloquently delivered wish to be hypnotized is based upon a stubborn objection to entrust oneself to the hypnotizer and to hypnosis.

[1] This psychoanalytic observation must be borne in mind when treating patients for insomnia, with hypnosis.—Trans.

IV

The State of Consciousness of the Hypnotized

The remarks made above in connection with the relation between sleep and hypnosis are in much need of study and completion. One who is profoundly hypnotized will retain, as we have already indicated, a controlling personality with tendencies and instincts directed toward the outer world. This controlling personality, in the case of the more developed ego, has been somewhat forced into the background. As we have put it, it has been relegated to a nook or corner of the soul. The psychoanalytic terminology permits us to formulate this situation precisely. Every psychic event, every psychic tendency is accompanied with a certain expenditure of psychic energy. The goals, the objects of the desire, have a certain cathexis.[1] Now we know, from the analytical point of view, that a goal, a person, an object, having a specific cathexis, need not always, to retain this charge without having the object, the goal, disappear from the psychic experience. General considerations that have been expounded by one of the present authors in another work make it appear probable to us that psychic experiences never completely disappear from consciousness. The only thing that happens is that occupations are withdrawn from the objects. It is absolutely necessary for us to attain clarity as to what we mean by the expression "controlling personality" in the psychoanalytic sense. Obviously, it is not a sum of all the psychic contents, the psychic totality, but that which the personality sets as its goal; in other words, the ego ideal of the individual. The ego ideal, from the psychoanalytic point of view, is the image which the individual carries with him of his own person, the image according to which he would like to mold his person. The love which the individual bestows upon his own body (narcism) is transferred to the psychic image of one's own person, or, putting it differently, the ego ideal is occupied narcistically. It arises from the identification with persons whom one regards with affection. The most essential portion of the ego ideal consists of identifications with one's parents, the development of the ego ideal, which presents

[1] Charge or investment. Besetzung is the German term.—Trans.

a complicated structure, continues throughout life in the form of identifications with teachers, heroes, leaders. Identifying oneself means assuming the rôle of another person without becoming conscious of this assumption; we identify ourselves most frequently with persons we love and honor.

Once the identification has taken place, the personality thus absorbed, and, as it were, thus incorporated, leads an extensive life within the ego, in the form of the ego ideal or a section of it. When we, therefore, speak of the ego ideal, we mean a relatively limited section of the ego; on the one hand it has bound up with it narcistic energies, on the other hand it sends out endowments to desired objects. We must distinguish ideal egos of varying degrees of differentiation. When we say that the total personality is retained during hypnosis, we mean that a highly differentiated ego ideal has retained the cathexis residuum, and that simultaneously the goals of the ego ideal also, the objects of the ego ideal have retained certain endowments (with regard to upbuilding of the ideal ego (*cf.* the *Entwurf zu einer Psychiatrie auf psychoanalytischer Basis,* by one of the present authors).

The ego ideal therefore retains a section of its cathexis even during sleep and hypnosis. But controls emanate from this partially occupied ego ideal, and herein is to be found the source of the dream censorship which permit the strivings of the dreamer to appear only in the distorted form of the manifest dream content. We must assume that the ego ideals or the total personality maintain rather close relations with the sleep vigils. The latter are controlled from the still retained personality. In fact, we must state in general that we cannot do full justice to the psychological attitudes during sleep unless we take into consideration the factor now under discussion.

We must add to our division within the ego of the sleeper between the sleep ego, the sleep vigil, the dream ego, which latter may be divided into the conscious and the preconscious dream ego, the further statement that all the attitudes expressed in this formulation are in some way controlled and supervised by the total personality. The stronger this controlling ego, the sharper will be the consciousness in sleep and dream that " I am only sleeping." We must assume that it is this ego ideal which determines whether the dream is to be cut short. We must apply the same attitude also to hypnosis and to those hypnotized. Particular importance is attached, in this connection, that the psychic stratum which serves as an intermediary for maintaining relations with the hypnotizer is subject to a constant control and

supervision on the part of the more developed personality. The section of the hypnotized personality and the section which has more or less detached attitude toward the hypnosis may vary considerably. We must accordingly, in each specific case of hypnosis, ask as to the "psychic depth" of the hypnosis. This expression means a quality of the experience in hypnosis which has no direct relation with the degree of the hypnosis. Nor must this quality be confused with the question of whether we are dealing with somnambulant sleep or waking suggestion. In fact, we must go further and say: The central section of the personality may react in very different manner toward the hypnotized personality. This central section may be more or less in agreement, or it may have a more or less detached attitude, *i.e.*, that of an observer, toward the phenomena of hypnosis. The more developed personality may even go so far as to regard hypnosis as mere play, in which connection the consciousness of its trifling nature may be now more, now less, outspoken. Finally, the hypnotic phenomena may take place with a perfect consciousness of conscious deception, in which case we are dealing with the work of simulation. There is a great number of intermediary experiences and nuances. Even the most outright simulation of hypnotic phenomena may, if it result from a vivid power of imagination, be worthy of serious consideration as an expression of biological effects on the body. Even the actor, whose activity is at bottom psychologically very close to that of the simulation, must—if he will play well—put himself in the place of the person to be portrayed, seek to live its life, given with a more or less considerable portion of the personality standing in detached observation. But even the actor who feels his rôle most deeply retains a controlling section of the personality, for he continues to speak only the words of his part. The actor who lives his part may even shed real tears, may present alterations of the pulse, of the respiration, as well as an altered distribution of the blood in his organism. Even acting is therefore never merely acting; all acting is more or less serious. To be sure, the physiological effect of the acting differs with the psychic profundity of the acting. Simulation and acting in hypnosis are expressions of a comparatively shallow hypnosis. The greatest profundity has been attained when the individual has recognized itself as completely bound up with the hypnotic relation. For the nuclear phenomenon of the hypnotic relation remains the psychic relation between the hypnotizer and the hypnotized person. Once we have reached this stage, hypnosis has been resolved into subjection. Our notion of the psychic depth of the

hypnosis depends essentially and primarily, therefore, on the hypnotic relation. Of course, we must emphasize emphatically that all the other egos of "hypnosis" are also controlled and supervised by the central ego. The essence of the suggestive relation will be treated in detail later on. But we have already advanced to the point where we may offer a systematic outline of the psychological state of the hypnotized person.

1. A suggestive relation exists between the hypnotizer and the hypnotized person. This relation is controlled by a more central section of the total personality. The psychic depth of the hypnosis depends upon which section of the personality belongs to the psychic relation and which section to the central personality. The various stages of this condition run all the way from simulation and acting to moderate and pronounced suggestibility and finally to complete subjection.

2. Sleep is produced by the suggestive relation. The suggestive relation is maintained with the sleep vigil. The share of the sleep ego and the waking ego vary with the relation between sleep vigils and sleep ego. If the latter is strongly predominant, we are dealing with the phenomenon of sleep without suggestibility. Intermediate stages extend from this point, passing through stages in which the individual is more or less awake to conditions in which the sleep ego has been reduced approximately to zero, and the individual is in a state of waking suggestion.

3. The sleep ego may be shot through with dreams, and these may reach down to greater or less degree into the suggestive relation. At one end of the scale we have the cases in which the hypnotized individual's own dreams completely replace the hypnotic relation, while images of a dreamy abstraction are present. At the other end are the cases of the suggestive relation which are almost free from any dream element.

4. Not only the individual's own dream material, but also his preconscious material, may be mingled more or less with the suggestive relation. There is the closest connection between points three and four. They cannot be sharply distinguished either from a practical or a theoretical standpoint. The series begins with hypnosis corresponding to more or less dreamy hysterical states, and ends with cases in which there is complete suggestibility and no appearance of the individual's will at all. In other words, the type of the trained medium.

5. Finally, we must also consider the degree of hypnotizability

and suggestibility. The degree of suggestibility should not be confused with the psychic profundity of the suggestion. A trifling somnambulist must, after all, be considered as very suggestible, although he is in a very superficial stratum of hypnotic experience.

We admit that the distinctions drawn here are by no means sharp. There is no doubt that in cases of the greatest psychic profundity (1) the degree of suggestibility (5) is for the most part considerable. If the share of the sleep ego (2) is very large, there will be a comparatively great probability that the individual's own dreamy elements (3) will appear. If only waking suggestion is given (2), the individual's own dreamy material and preconscious material (3 and 4) will not be of great importance. If there is a strong element of such dreamy material and preconscious material of his own (3 and 4), the profundity of the relation (1) will probably not be very great. This exposition is of course inadequate in every respect and can by no means exhaust the immense variety of the actual phenomena. Finally, the expressions sleep ego, waking ego, dream ego, remain after all only designations for the instinctive urges of a total ego and may be isolated only in the description, never ceasing in the last analysis to retain their connection with an ego whose unity is undeniable in spite of all its cleavages.

V

The Suggestive Relation

The characteristic point about suggestion is obviously in the fact that we may be made by it to conceive, perceive, judge, and even act, without due cause[1] (Lipps has given a similar definition). We must place chief emphasis on the words, "Without due cause." These words imply a dual condition: The individual as a rule is either complying with the conditions set by reality or is pursuing ends that emanate from his own total personality. We assume that the individual builds up ideal egos which have the function of regulating the relations to reality, which unite the ego impulses as units and which thus not only comply with the demands of society, but also with the demands of the ego's personality. One of the present authors has explained in another work that the attainment of reality in perception, in conception, and in thinking, is as much a demand of the ideal egos as it is a demand of society, for the ideal egos also adjust the personality to reality. As a rule we have a right to speak of suggestion only in cases in which the suggestion secures the individual's opposition to his ego ideals. If the ego ideals are ultimately in conformity with the suggestion, we have no further reason to speak of suggestion as such. One of the present authors pointed out in another work that the affective mechanisms present affinities in their ultimate bases, but that it is by no means practical, merely because of the existence of transition cases, to apply to the entire domain a term whose extremes represent definitely outlined psychological types. This being the case, it becomes necessary to reject the latest attempt of Strauss to expand the definition of the notion of suggestion to cover in principle the entire daily life of faith, belief, etc. Like Strauss, we admit the "we" experience. This latter is built on the ego and on the directly sensed simple or multiple "thou." The fact that identifications influence the ultimate form of this We in a decisive manner may be fully granted, although we cannot at this place investigate in detail the question of the share of the identifications in the formation of the "We." There is no doubt that it is

[1] From the point of view of the person suggested.

also true, as Strauss says, that convictions are dependent on the totality situation, on the living We. Doubtless spiritual acquiescence, faith, belief, are closely connected with the personalities of our environment. But both psychoanalysis and one of the present writers have never failed to point out this fact. Suggestion, however, is distinguished from the other above named phenomena by the fact that the central personality has not the same attitude toward the suggestion with which it complies and the other opinions which it accepts. And it is precisely this particular form of the experience that must be explained; Strauss cannot offer the needed explanation because he refuses to see the problem.

The definition given at the head of this chapter includes also the fact that we are dealing with both a suggesting and a suggested personality. At any rate, this fundamental type must be borne in mind. In the suggestion state, something is thought, conceived, or done, to please another, although it contradicts the ideal ego. This phase also must be borne in mind. It is perfectly clear that if I do a certain thing to please another person, it is my feelings which are involved; that the other person does not really attain its power of suggesting to me until he secures my coöperation, the use of my feelings. But it would be wrong psychology to assume that the other person is therefore of no consequence and that the root of the suggestion is autosuggestion, a doctrine which is supported by Coué and Baudouin. Similarly it would be wrong to say that there is no education but self-education, because the thoughts and feelings aroused by the educator are my thoughts and feelings. We shall have to cling, in principle, to the fact that hypnosis and suggestion are concerned with a process proceeding between two persons. An apparent contradiction to this formulation is in the fact that it is, after all, impossible to deny the presence of autosuggestion. Here again we should consider it to be a useful distortion of ideas to continue to speak of autosuggestion whenever an action that fails to correspond with the ideal egos as accommodated to reality, out of thoughts, ideas, impulses, of any kind. We have a right to speak of autosuggestion in the correct sense of the word only when the individual consciously introduces a cleavage of his experience into groups and thus creates a suggestor within himself. We shall not go wrong if we assume that the individual can succeed in bringing about such a cleavage only by identifying himself with another personality. The conception of identification is of sufficient importance to deserve more detailed discussion. We may speak of identification when a part of the experience of

another is claimed as our own, and we thus acknowledge that we should like to occupy his position (*i.e.*, stand in the boots) of the other person. In the process of identification we play a part without necessarily being conscious of having assumed this part. We have an interest in playing the part of another only when we love, honor, admire, this other. The example given by Freud is taken from Schiller's *Wallenstein's Lager,* in which we read, concerning a sergeant-major of cavalry (Wachmeister):

> " Und wie er sich räuspert und wie er spuckt,
> Das habt ihr ihm glücklich abgeguckt."[1]

The *Wachmeister* is completely unaware that he has acquired habits that serve as an expression of his desire to be like and to be esteemed like Wallenstein himself. No doubt this soldier loves and admires Wallenstein. In part, he has himself become Wallenstein, but he still recognizes the worth of the esteemed and valued object. If the identification had become complete, Wallenstein would have become superfluous to him. To use the analytic terms, the *Wachmeister* would then abstract the libidinous cathexis from Wallenstein and concentrate it entirely on the Wallenstein within him. The identification would then be a perfect one. But the Wallenstein within him still retains a certain special position. The case is similar to that of the teacher whom we may once have loved but have now outgrown, whom we believe we can now dispense with, because we have identified ourselves with him. It is out of the identification, as has been mentioned, that our conscience is built up, which arises from our identification with parents, teachers, etc., but also from our identification with all the individuals about us who represent society and its demand, and even the parents, teachers, etc., are in the last analysis representatives of this society also. Every identification creates for itself an ego ideal, which always retains a certain independence within the ego.[2] On such identifications, on such ego ideals, is based the possibility of an autosuggestion in which a section of the individual detaches itself to a certain extent as an ideal ego from the ego and assumes the rôle of a suggestor toward the remaining portion of the ego. The use of the term autosuggestion by Coué and Baudouin and their therapeutic methods is fundamentally misleading.

[1] " His belching and expectoration,
So far extends your imitation."

[2] Freud's ideas have been carried further by one of the present authors in his " Entwurf zu einer Psychiatrie auf psychoanalytischer Basis."

For it is obvious that it is the physician and the pedagogue who present the demand which is thereupon accepted and appropriated by the patient and the pupil. We may at best only admit that the technique applied by Coué and Baudouin in its repeated emphasis on the share of the suggested individual himself makes clearer the entrance of the suggesting person into the ideal ego within the framework of the personality itself. We shall not be in a position to understand this entire situation until we have gone more deeply into the psychological structure of hypnosis with the aid of the psychoanalytic point of view.

It is obvious from the material communicated in the preceding chapter that beyond the suggestive relation between hypnotizer and hypnotized there stands also an ego ideal which serves the ends of the total personality and exercises a continuous control over the relations between hypnotized and hypnotizer, between suggestor and suggested. Even aside from the fact that the suggesting person, the influencing person, attains his significance only through the psychic experience of the person influenced, the person hypnotized or influenced is by no means a mere tool of the influencing individual and without a will of his own. If a profoundly hypnotized person is asked to perform an act that is unreasonable, an act in contradiction with his total will, his total personality, the following may happen: In spite of his profound hypnosis, the hypnotized man may refuse to obey. The paranoid hypnotic subject, for instance, will not renounce his delusions although he may otherwise be highly suggestible. A jealous woman, otherwise quite susceptible to suggestion in hypnosis, will resist emphatically when asked to believe in the infidelity of her husband. A woman patient who had obtained veronal from a family nurse in order to commit suicide, will refuse to communicate the name of the nurse in spite of a suggestibility that is otherwise perfect. Other hypnotized persons will awake from their hypnosis if the demand of the hypnotizer as well as the total situation are no longer in accord with his other ego ideals. Such observations must be taken as decisive in the question of the relations between hypnosis and crime. We shall postpone a detailed discussion of this problem until after we have given a psychoanalytic theory of hypnosis.

VI

The Psychoanalytic Theory of Hypnosis

Ferenczi considers hypnosis to be a resuscitation of infantile erotic masochistic adjustments. The hypnotizer is an image either of the father—paternal hypnosis—or of the mother—maternal hypnosis. Instinctive impulses from the domain of the œdipus complex are at the center of hypnosis. Ferenczi also places suggestion and suggestibility at the center of his considerations.

As a matter of fact, hypnosis and suggestibility have an erotic root. If one hypnotizes women, the hypnotizer often has occasion to observe, just before the hypnotic sleep and just after the awakening, the glance of surrender which is characteristic of sexual excitement. A trembling corresponding to the trembling under erotic excitement is not infrequent. The hysteriform rigidities at the beginning of a hypnosis frequently show a very distinct relation with the motions of coitus. On attempting to obtain statements from the hypnotized, one is often told of a sensually pleasant feeling, of a delightful sense of fatigue, etc. Quite frequently, sexual excitement is frankly admitted. The accusations frequently made by hypnotized patients against the hypnotizer, that he has misused them are due to the erotic imaginings aroused by the hypnosis. A woman patient (propably dementia precox) whom we observed had the distinct impression during a lay hypnosis conducted in the presence of other persons that she was being subjected to a compulsion to think: "I love you." The clairvoyance of dementia precox patients with regard to psychological problems is particularly apparent in the case of hypnosis. *Schizophrenic* and *paraphrenic* patients consider being hypnotized and being influenced sexually to be one and the same thing. Even the linguistic usage of daily life must not be ignored; erotic phenomena are often conceived as involving magic or hypnosis. "You have hypnotized me" has actually become an expression denoting an erotic compulsion. A portion of the typical fear of women is the fear of being violated under hypnosis. We have often heard such tales from women patients of the clinic, hypnotized by us, although we make it a principle never to hypnotize except in the presence of third persons. This statement was

particularly striking when uttered by an intelligent female bank clerk, who had, to be sure, become afflicted with her neurosis by reason of her father's efforts to possess her sexually and of his repeated attempts to violate her. The fear of violation is without doubt an expression of the corresponding wish, which has been aroused by the hypnosis. Gentle speech, shouted rebukes, manhandling, are not only devices in the technique of hypnosis, but also in that of erotic seduction, " fixation," stroking—certain techniques even make very extensive use of stroking the body—are common both to hypnosis and to the erotic.

The results of phenomena in animals resembling hypnosis yield very similar material (*cf.*, on this point, Mangold, as well as below).

This view of the matter might of course be contradicted with the statement that hypnosis may be practiced not only between persons of different sex, but that there may also be a hypnosis of man by man and of woman by woman. In general, there is no reason to assume that these hypnoses are more difficult to bring about than those between persons of opposite sex. To be sure, we have been taught by psychoanalysis that homosexual inclinations are present in all persons and it may be assumed that hypnosis between persons of the same sex may operate through the homosexual tendencies of man. We may here again refer to the many data given by paranoid-schizophrenes, who very frequently find themselves influenced in a homosexual direction by hypnosis. Psychoanalysis is the surest means of determining both the heterosexual impulse as well as the homosexual impulse in hypnosis. For very frequently persons are taken for analysis who have already been subjected to hypnotic treatment. A particularly instructive example of this kind is given below.

A university student, aged twenty-two, who had already undergone, in his period of puberty, a short phase of pronounced compulsory delusion symptoms, had recently been suffering for some months from a number of compulsory symptoms in which anal erotic conditions were evident to a striking degree, and in part quite frankly expressed. Since the beginning of his illness, the patient had been suffering from a stubborn obstipation for which no basis could be found either clinically or by Roentgen observation; he suffered from involuntary passing of flatus, always occurring in certain situations beset with complexes and suffered still more by his fear of their occurrence. But these principal symptoms were only the center of a number of other somatic symptoms which seemed to become blocked in a peculiar manner—not to be described here—

on their way to conversion and to a complete formation of somatic symptoms, and also on account of the entire system of compulsory neurotic thought productions, fears, and impulses, together with its accompanying opposite in the form of the ego impulses and the ego ideal. The mechanism of this symptomatology turned out, on analysis, to be uncommonly fixed; the symptoms were interrelated in a peculiarly rigid manner and they appeared in a typical condition of dependence upon definite determining internal and external experiences. For instance, to take but a single example, namely, the symptom of the passing of flatus. This phenomenon occurred particularly in situations in which any kind of attempt—promising even the remotest possibility of a love relation—was made to approach the female sex; the tormenting fact about the flatulescence which appeared under these circumstances was in the great frequency of the flatus administered, as it were, *in dosi refracta,* so that the patient hardly dared thereafter to emerge from his room. On analysis, this passing of flatus turned out to be a sort of "signal" on the part of the unconscious, an expression of inhibited anal and homosexual adjustment, which thus most effectively expressed their opposition to the establishment of any heterosexual relation. We shall go further into this connection later. In an extremely depressed mental state—seclusive, misanthropic, incapable of any activity—this patient now sought psychotherapeutic treatment. For a number of reasons, it was first attempted to interfere with the symptoms of the patient by the path of hypnosis, and, in the first place, to get at the state of obstipation. After several hypnotic sessions, as a result of which only a temporary and unsatisfactory success could be recorded, psychoanalytic treatment was begun with the patient, and considerable improvement attained after a number of months. The patient has been freed from his somatic symptoms and is now again pursuing his studies with great zeal and success.

At the conclusion of an analytic session, this patient, after the above mentioned improvement had already been observed, was asked what thoughts and feelings had been his before going to sleep under hypnosis. He at once reported a feeling of "having to laugh" which regularly came upon him before going to sleep and presented the following notions in this connection, without being asked. In the *gymnasium,* he had had a professor at whom he had been obliged to laugh very much, apparently a stupid, narrow-minded person. Then, at the age of about twelve, he had attended the Mosaic religious instruction, together with his cousin; his cousin had once stealthily

made a drawing of a snake during the recitation period, and had said that the snake was the professor of history, at which he, the patient, could not help laughing. A later notion was a recollection of the fact that, when a boy of about six years of age, he had often been in terror while defecating, that snakes might creep into his anus. At the end, he added somewhat shyly the supplementary remark that the professor in the first notion, had been an old man, but to be sure, he had been well up on grammar. The situation, as may be inferred from this complete series of notions, is fairly unambiguous. In connection with the fear of snakes while defecating, it should be noted that this fear had already been expressed on an earlier occasion during a dream analysis and subsequently became a sort of co-reminiscence to reveal libidinous relations and homosexual inclinations toward the patient's father. For the sake of completeness, let us repeat the succession of notions as they were stated at that time. The young man at first believes he recalls that the cases of terror of snakes while defecating appeared—strikingly enough—toward the end of each month; then that he had long been of the opinion, when a mere boy, that menstruation puts in its appearance toward the end of the month for the sake of orderliness, as it were—and finally that his father had once remarked to him that women were sexually most passionate at the period of menstruation. It was only when we obtained this second series of notions that we were in a position to complete and unify the picture of our interpretation. The two teachers in the first set of notions—the succession of incidents, beginning with the person of the hypnotizer, are substitute formations for the person of the father. The snake, however, is the Professor of Religion, as one of the notions definitely states. We may add: again the father, the father's member. It is the father's member which is here made a sort of anal love object, with a pronounced current of passive masochistic change at the end of the sadistic-anal phase of the development of the libido. Taking the place of the column of feces and of the feeling of lust connected with defecation; and it appears worth while to note also the identification with the boy's mother, in the second series of notions, which is so important in the development of this neurosis, and the manner in which the anal zone appears—perhaps under the influence of immature sexual studies undertaken in infancy—transformed into a cloaca-orifice of passive—feminine character, into which the father's member penetrates at times of "particular sexual passion." The notions with regard to the personality of the hypnotizer point

through the two teachers directly to the father and also, in connection with their attachment to the hypnotizer, they lead back to the anal-erotic relation to the father. On being commanded to go to sleep by the hypnotizer, the hypnotized individual has awakened in him, as has been shown by Freud and Ferenczi, "a portion of his archaic heritage, which had also been conferred upon the parents and which had experienced an individual reinvigoration in the relations with the father," in which connection in our specific case, the infantile relation with the father bears in addition a strong libidinous note of its own and this enhances the possibility of hypnosis as becomes clear from what has been said above. This individual, so to speak, makes use of the opportunity afforded by the hypnosis, as an occasion for permitting the revival of the still strong libidinous fixation of his infantile relation to his father, which has—nevertheless—been changed long since into relations of kindly affection. Particularly characteristic is the hypnosis itself, as well as the series of notions whose connection is the phenomenon of a desire to laugh, a compulsion to laugh. Here we find a very characteristic companion piece to the person of the hypnotizer, who lays claim to a large share of power in the midst of the common events of daily life, a power that a critical test of reality would surely not bestow upon him, and to which the patient must none the less submit, in the persons of the two narrow-minded and much derided teachers. For the relations of kindly affection toward the father have for a long time been weakened by the sharp criticism of adolescence—the father is an old man—as the accompanying remark, we may note, indicates, to whom certain accomplishments must nevertheless be granted. In our case, therefore, the desire to laugh, just before going to sleep in hypnosis, appears determined as the final stage of the infantile relation to the father, originating in the unconscious, inhibited, and again revived in hypnosis, but it is likewise determined by the ambivalent attitude of the hypnotized to the hypnotizer, which vacillates between scorn and admiration, and is also dictated by the relation toward the father during the later period.

This observation is particularly instructive because it shows us that the natural impulses of the hypnotized are the determining factors in the variety and form of his susceptibility to hypnosis. The attempt at hypnosis producing a smile in the patient, awaken anal-erotic trends of ideas corresponding to the patient's impulsive tendency. We are dealing with the same ambivalent attitude toward the love-object which is familiar to us from compulsion neuroses.

This is also the source of our patient's smile. We may here insert the remark that laughter is not at all an unusual phenomenon at the beginning of hypnosis. In the case of compulsive neurotic characters, this laughter has the expression and the significance of derision, in hysteria and in the related types of character, it has the expression and the significance of a disguised erotic surrender. At any rate, we must be mindful of the fact that the sexual constitution of the individual finds an expression in the nature and form of the hypnosis. Persons strongly disposed to love, persons with the tendency to fixate love-objects powerfully, customarily are easily inducted into profound hypnosis. Hysterical individuals with a strong tendency for object fixation as a rule are particularly susceptible to hypnosis, while the hypnosis in the case of compulsion neurotics frequently encounters difficulties, which is connected with the sadistic attitude of compulsive neurotics toward their objects (love objects). Although we are placing considerable emphasis on the erotic root of hypnosis, we are obliged, none the less, to point out that the eroticism of hypnosis constitutes a much constrained type of eroticism. We must even declare outright that we consider it as typical for hypnosis as such that its sexual content is necessarily not at first apparent to the individual. To be sure, this sexuality at first cut off from goals, frequently becomes further differentiated in the further course of events, and may be enhanced to the point of an offering of one's person. But this should not prevent us from recognizing that hypnosis is as a rule an erotic state with inhibited goals.

In addition to the erotive root, as above described, hypnosis has a second root. This root is subordination to the authority of another. Anything calculated to enhance the authority of the hypnotizer or suggester also enhances the susceptibility to hypnosis. The hypnotizer's reputation, the knowledge of the fact that he has influenced other persons, his age, dignified appearance, higher social station—all these are factors favoring the hypnotizability of the persons experimented on. During the war, officers were as a rule harder to hypnotize than privates. Children, adolescents, are more susceptible to hypnosis than grownups. Persons not as a rule accustomed to recognizing authority of any kind are harder to hypnotize. We may state this thing in other words by saying that hypnosis is an attitude of subordination, an attitude of self-subjection. It remains the constant task of the hypnotizer to grasp correctly this situation, together with its libidinous background in the case of persons of different sex, age, and social station and to make use of these relations by

means of an hypnotic technique tactfully and rigidly adapted to the case. Thus, for example, one of our patients, a high state officer, had turned out to be entirely refractory in a number of hypnotic experiments. The obviously painful situation of being obliged to hear the introductory suggesting commands to sleep were thereupon spared the patient by informing him, at the opening of a new hypnotic experiment, that he need only lie on the sofa, whereupon he would fall asleep of his own accord, without any interference on the part of the hypnotizer. As a matter of fact this patient fell into a profound sleep a few minutes later, and the hypnosis thereupon proceeded satisfactorily, aided by his exceptional suggestibility. In this case, it was apparently necessary, at first, to remove certain resistances to hypnosis, which were conditioned by differences of age, presumably also of social station, in order to permit the exceptional hypnotic susceptibility of the patient to make itself felt. We may say however that the two muscular phenomena of hypnosis, namely, absolute relaxation and catalepsy, may both be conceived as the expression of an unconditional willingness to let oneself go. Even the position of the body in which hypnosis is practiced is an expression of complete subjection. The hypnotized person is recumbent, the hypnotizer stands by his side. We have every reason to assume that such attitudes correspond to the attitude in masochism. For the nucleus of the masochistic attitude is not to be found in the fact that the subject wishes to suffer pain, but that he subjects himself completely and unconditionally. Such a case is found in the statements of a schizophrenic who had presented masochistic traits from early youth, to the effect that one of his imaginings at the early age of six to eight had been that of being abducted by gypsies, of being seated on the lap of a gypsy woman. The pain, which is felt as pain, is suffered and sought as a symbol of absolute subjection.

Precisely this union of goal-inhibited eroticism and unconditional faith and subjection, describes the attitude characteristic of the relations between children and parents. This is an important attitude in the frame of the Oedipus complex which—as is well known—has not only a heterosexual form, but also a homosexual form. We cannot here take up the question of examining the relations between this hypnotic love-experience and the mature love-experience. But two traits are of considerable importance. In the case of the normal love-life, this subjection—where it occurs at all—is given in the case of both mates. Furthermore, in the mature love-experience, the personality of the beloved is, after all,

seen in more individualized traits than those in which the hypnotized beholds the hypnotizer, or the suggested beholds the suggestor. But we shall devote more attention to these problems later on.

We shall attain a more profound understanding of the psychology of hypnosis by beginning with the psychology of masochism. In order to obviate misunderstandings, we take the liberty to point out the following with regard to our use of the term masochism, in accordance with the principles of psychoanalysis. Psychoanalysis speaks of the polymorphously perverse[1] instinct-life of the child, but psychoanalysis does not fail to see that fully developed perversions are not a mere echo of infantile tendencies. To go apart from the fact that any instinctive impulse does not attain its full significance except when studied in connection with the entire psychic structure, which of course is quite different in childhood from that of the adult, we must also assume the existence of those differences between the infantile partial instinct and the perverse instinct, which are present when we compare a nascent psychic tendency with a full grown psychic tendency. Every Masochist also presents sadistic traits: *vice versa,* every Sadist also presents masochistic traits. The Masochist identifies himself with his ruler. By means of his subjection, he shares the enjoyment of the greatness and power of the latter. In occasional sadistic traits he expresses this identification. Freud has analyzed these mechanisms with perfect clearness. We identify ourselves only with those persons whom we should like to resemble in their essential essence, whose rôle we are ready to assume. In other words, the longing of the Masochist is the acquisition of power by the road of subjection. He serves, in order to have a share at least mentally in the power of the other person, and he who subjects himself without will to such a mighty one as a matter of fact not infrequently does in this way attain a morsel of the power which he would not have gotten in any other way. We should therefore be inclined to consider the primary impulse even of a Masochist as sadistic. But we do not underestimate the difficulty involved in the fact that masochistic traits are found also in Sadists, which obliges us to assign a certain independent significance also to the desire for subjection. In the last analysis, the contrary impulses are here again particularly close together and the final formulation of an instinctive impulse depends not only on the

[1] Polymorphous-perverse is Freud's designation for the sexual character of the child, in which it may transgress to all perversions because of its original bisexual character and habits.—Trans.

opposite impulse group, but also on conditions inherent in the entire personality. At any rate, we must retain the thought that an ambition to attain power by indirect means is present also in masochism.

Transferring to the hypnotized person the facts thus learned, we find that he subjects himself so completely to the hypnotizer only for the reason that he wishes to have a share in the greatness of the hypnotizer. We may now ask, wherein consists the greatness of the hypnotizer, or, in other words, what is the significance of the hypnotizer to the hypnotized person? His abilities are found in the fact that alterations take place in the external world at his mere wish. For the hypnotized, at least, he is the great magician, who alone is capable, by his wish and will, to produce creative changes in the universe, to eliminate objects from the universe, or supply them to it. In addition, he has this great power over the bodily functions of the hypnotized, in other words, the hypnotizer is a magician, a sorcerer, in the mind of the hypnotized. We may assume, for the present, that the hypnotizer really does not possess these magic qualities. For some reason, the hypnotized must assign these qualities to the hypnotizer, or in other words, these magic faculties are projected into the hypnotizer. In our use of the word projection, we are expressing the fact that the desire for such a magic power must be living in the hypnotized person himself. To be sure, the hypnotized does not dare admit this wish to himself or conceive it as materialized in connection with his own person. Therefore he projects the wish to the hypnotizer and thus participates, by the path of identification, in a magic power which he could not otherwise ascribe to himself. The desire for omnipotence is thus pictured as fulfilled, by "unconscious manipulation" is projected out into the other person, and again absorbed into the other personality by the path of identification. It would hardly be possible to approach the psychological phenomena in hypnosis by simpler means.

A few general remarks on the desire for omnipotence are necessary. We have every reason to assume with Ferenczi that the child ascribes such omnipotence to itself in the most primitive stages of its development. We refer the reader to Ferenczi's essay for details. In psychoanalysis, we trace back such omnipotence to narcistic adjustments of impulse, to adjustments serving predominantly the love toward one's own body, toward one's own person. Only when such adjustments are over-powerful do body and world resolve themselves into one, the world similarly becoming as distinctly subject to the wishes as our own conception. We never completely

relinquish this demand to control the world by the thought alone, without passing through the toilsome stage of actions adapted to reality. The desire for the existence of supersensual powers that move the world by thought alone or by forces resembling thought, is all too easily condensed in all of us into the belief that such forces really exist. All of us would be immensely strengthened in our self-confidence if any one at all should turn out to possess such magic power. For each one of us would have a share, as it were, in this Godlike faculty. Kaplan refers with insistence on the relations between hypnosis and animism. Here lies one of the profoundest roots of hypnosis. It is based on the psychology of the hypnotized and not on that of the hypnotizer. The hypnotizer's function is simply not to disturb the process. The reader will observe that here again we are regarding the infantile as the root of hypnosis. The hypnotizer makes use of the infantile element in the situation by his strokes, his monotonous lullabies, and other such performances, in this way adapting himself to the demands of the hypnotized.

We are accustomed, in psychoanalysis, to characterize psychic phenomena by pointing out those phenomena in the life of the child to which they furnish a regressive correspondence. In fact, we are actually speaking of a regression in this sense. We were therefore obliged to draw a parallel between the hypnotic state and that phase of infantile experience in which the child no longer has the courage of assigning magical faculties to itself but at least acknowledges them in its parents, thus sharing magical abilities at least through the intermediation of the parents, with whom it identifies itself.

To be sure, this characteristic is by no means present in all the phenomena of hypnosis and suggestion, for there is no doubt that regressions are attained in sleep which obviously lie even deeper. On the other hand, the obvious appearance of erotic traits would have to be ascribed to a higher stage of psychic development. In all the preceding remarks, we have characterized only the "chief fixation centers" of hypnosis. Bjerre finds in hypnosis a return to the embryonic state, a view that has only a partial justification. In certain phenomena of hypnosis (sleep phenomena), for sleep, according to the anal-erotic doctrine, which it is not our duty to expound here, presents essential traits of regression to the embryonic.

But there are gaps in our presentation up to this point from another point of view also. Our exposition ignores the fact that the regression here described embraces only certain sections of the personality. We have already pointed out that the hypnosis may be

effected at various psychic depths. We have spoken of the psychic depth of hypnosis; in accordance with earlier formulations of one of the present authors, we might even say that the hypnosis is now closer, now further away from the center of the ego sphere. We have still to define more definitely, from a psychoanalytic standpoint, these descriptive concepts. It is most expedient, in this process to begin with the fact that the hypnotized who hallucinates negatively, nevertheless takes into consideration the reality that appears to him not to be real. He turns his eyes away from the negatively hallucinated objects and will find his way about in a chamber of the most complicated construction, though he may not appear to be aware of its construction. The actions corresponding with the hypnotic suggestion frequently make the impression of being weak, superficial, lacking in energy. But we must hold fast the thought that the hypnotized individual, though it live in a suggested world, nevertheless pays some attention, to a certain degree, in its actions, to the real world. In other words, ego ideals, which maintain intercourse with the world of reality, have retained a certain fixation. And it is these ego ideals which are constantly on guard to see that nothing shall befall the individual which might oppose its total objects; in other words, all those regressions of which we have spoken are only partial regressions, and a not inconsiderable section of the personality maintains normal relations with the outside world. An attitude of subordination located in the periphery of the ego is accordingly not far from *acting,* in the sense that has been explained above. It is worth while to ask what are the conditions present in the subjection found in hypnosis. It is only the subjection in hypnosis, not the subjection in any other sense, that equips the hypnotizer with magical faculties, or in other words, only the hypnosis subjection reaches the profound regressions expressed in the magical stages. Simultaneously, the hypnosis has penetrated down to their profound psychic layers, has been brought very close to the center of the ego. Even in such cases, we shall be obliged to doubt whether the faith in magical influencing becomes an inner conviction to the individual in the full sense in which this applies to certain schizophrenics. In fact, to go still further, it will be necessary to point out that we have shifted the fixation center of hypnosis to a point at which the individual is already almost ready to turn his back on the magical *Weltanschauung.* In the control, the masochistic subordination to the hypnotizer commonly predominates, and this masochistic subordination is characteristic also of subjec-

tion outside of the hypnosis. The center of gravity in this condition is shifted more and more to the adjustment lying within the masochistic-infantile-Oedipus complex.

Our exposition above now enables us to oppose the psychic phenomenon of hypnosis definitely to other modes of experience. The peculiar state of hysteria is characterized—as opposed to hypnosis—by the fact that there is no *rapport* to a suggestor, and we not infrequently find that a hypnosis passes over into the state peculiar to hysteria when the individual in hypnosis breaks the *rapport*. In hysteria, the individual lives directly for its own complexes. In hypnosis, the individual is living out (*ausleben*) these complexes through the intermediation of the hypnotizer; the regression to the magical is more pronounced in hypnosis. For this reason, the personality of the hypnotizer remains even more undifferentiated than the person to whom the hysterical individual transfers its infantile love-adjustments. In other words, the figure of the hypnotizer is even more stereotyped than the figure to which the hysterical person turns. This does not prevent the hypnotized person, in some cases, from assigning the power of the suggestor only to certain personalities, making that power "nontransferable" to others. For there enter into the hypnotic state not only the profoundly infantile material, but also, without doubt, differentiated libidinous impulses, differing in degree with the individual.

An observation demonstrated by one of the present authors in a meeting of the Vienna Physicians' Association (*Gesellschaft der Ärzte*) is of great interest in the study of the problem of the relations between hypnosis and hysteria. A sixteen-year-old boy was hypnotized by a lay hypnotizer, had a fit of insane violence in hypnosis, and attacked the hypnotizer, who knew no other course to take but to call for the assistance of the police. The hypnotized boy had to be manacled. When in the clinic, he had already been calmed and pacified, he knew nothing of what had taken place. A new hypnosis in the case of the same boy yielded the following information: The young man had been well known as a good medium in the vicinity of Vienna and had been repeatedly used by various persons, perhaps two hundred times altogether, for public exhibitions. One of these lay hypnotizers had on many occasions ordered him to go crazy and had suggested to him that a fly was approaching him, becoming larger and larger as it advanced, thus filling him with an acute sense of fear. During the hypnosis, which had taken place in Vienna, the other hypnotizer now appeared, and on the latter's

command the young man now went through his feat. The witnessing hypnotizer was helpless when faced with this "insanity" originating in the earlier hypnosis. But in every hypnosis we are awakening something that has originated in profounder layers. We are always applying to the past which is anchored in the impulse of life. But even though there be connections between a far-penetrating hypnosis and hysteria, the differences are yet great enough to enable us to distinguish sharply between the two states. Hypnosis is therefore not an artificially induced hysteria, as was assumed by Charcot.

It is still easier for us to characterize hypnosis as contrasted with those states in which the belief in magical powers appears as a dominating force, namely, the paraphrenic and schizophrenic magicians. Here the individual lives in magic, and the attitudes originating in the Oedipus complex lose their significance.

We have several times spoken above of the relations between hypnosis and erotics, and by way of a final recapitulation we shall ask once more to what extent the erotic phenomena of the hypnotized differ from the actual love life. The materials for answering this question have in part been already given in the earlier portion of our exposition. We have pointed out that the hypnotizer as a rule has no personal value. He is a stereotyped outline, lacking specific individual traits, while true love is characterized precisely by the fact that the object-person in some manner completely answers the requirements of this love. Only that love will be a rich love which the loved personality embraces in all its fullness. Accordingly, the traits of subjection can in no wise dominate so exclusively in love as they do in hypnosis, unless we assume the presence of the attitude of serfdom. Let us, for the rest, point out merely the general principle that a phenomenon embracing two persons can never run a course in which the attitude of the other personality is indifferent to the total experience. The peculiar position of the hypnotizer toward the hypnotized, and of the loving individual toward the individual loved, must be one of the essential determining influences in the phenomena of hypnosis and love. And, finally, we now come to the statement of a decisive point. In any true love and surrender, the individual yields himself without reservation, or at least, any such reservation is relegated far into the background of the experience. We have repeatedly emphasized the reservations made by the hypnotized. The surrender of the hypnotized is a surrender subject to recall. Hypnosis is thus deprived of that ultimate seriousness which characterizes any truly great passion. "Hypnosis

is merely a shy attempt to return to chaos; it lacks the great, free, unconditional surrender."

The psychology of the hypnotized is incomplete without the psychology of the hypnotizer. The analysis of the hypnotizer is a problem that still remains to be done. But general considerations make it appear improbable that the hypnotizer does not feel what the hypnotized presupposes of him. He must feel incorporated in himself, in some obscure corner of his soul, this magical power; he must raise the demand for unconditional masochistic subjection and must bear within him the wish for the sexual subordination of the other person. The fear of violation on the part of the hypnotized necessarily is a concomitant of the wish to violate on the part of the hypnotizer. We very well know that lay hypnoses are—as a matter of fact—often made use of as a means of sexual approach. The transference made by the hypnotized must be accompanied by a counter transference made by the hypnotizer. It is worthy of note that an unsuccessful attempt at hypnosis produces in the hypnotizer a feeling of personal disappointment which far transcends those bounds that would express a mere natural interest in the business in hand. To be sure, all these experiences will, in the case of the hypnotizer, lie far out in the periphery of his experience. The hypnotizer has extremely wide sections of his personality turned away from all these things, in fact, the very essence of hypnosis is in the fact that the hypnotizer should be turned toward reality, should be in the full possession of highly developed and highly differentiated ideal egos, and that the regression characterized in the above remarks should remain limited to the extreme periphery of his soul.

VII

Hypnosis as a Social Phenomenon

Society has an extensive insight into the performances of the individual and the question of whether and to what extent the performances in hypnosis represent enhanced performances is socially of great importance. It is obvious that the performance of each one of us encounters many obstacles. We are by no means capable of always performing our utmost. We cannot dwell here in detail on the theory of all these points, but we must cling to the thought that we always are under the influence of many adjustments, of contradictory basic tendencies which prevent us from giving ourselves up entirely to things. Rigid formulas of long standing, originating in differentiations which have no adaptability to new situations, deprive us of that childlike freshness which is necessary for the full, exhaustive understanding of objective relations and structures. Creative processes of all kinds begin with the fusing down of differentiations and the attaining of an undifferentiated condition out of which the new creation may emerge. To be sure, the individual must enter wholly into this new creation if a valuable achievement is to be attained. The data that have been collected in the matter of enhancing performances in hypnosis are not very extensive. Such material is limited to the enhancement of the performance of the sensual organs (Trommer). It has been pointed out, and rightly so, that attention is not diverted in hypnosis by intervening happenings. Ach found the power of mental performance, as tested by a continuous examination in addition, to be increased almost one-fifth beyond normal. Prantl investigated examinations of memory. It is rather an examination of the attention than of the memory itself. He recapitulates his experiments to the effect that it is possible by means of suggestion approximately to double the power of performance of tests in attention or memory.

One of the present authors (Kauders) has investigated enhancements of intellectual performance, including in part performances of combinations of numbers in a series of studies that have not yet been published. For these experiments, he made it a principle to select only persons accessible to profound hypnosis and who are fully amnesic

of experiences in hypnosis. The method of experiment was this: A certain difficult task, usually an arithmetical problem, was submitted to the person experimented on, during hypnosis, with the instruction to know the solution in the next hypnosis, which was frequently separated by a week's time from the former hypnosis. In other words, extra-hypnotic, conscious intellectual manipulation being completely precluded, a post-hypnotic order was issued for the next hypnosis. The results of these investigations cannot be given here in full, but by this method it became possible to attain a perfect multiplication of two three-place numbers. The manner in which the result was offered in the second hypnosis was in these cases extremely striking. The result was not presented without a hitch as if it had been a facile and simple task, but the six-place number of the answer was communicated integer by integer, with indications of obvious effort, as if the problem were only now being solved, yet the order of the figures was absolutely correct. Of course, appropriate control experiments were inaugurated in the case of all the mediums, these experiments involving the arithmetical skill of the medium in question, both in the normal state and in hypnosis itself, without a previous hypnotic command.

On the subject of creative achievements in hypnosis, the following remarks may be made. If the *rapport* with the hypnotizer continues, it is probable that that ultimate freedom will not be attained which is necessary for the performance of any truly great work. Conditions of autohypnosis and autosuggestion will also not make possible those ultimate recapitulations of the total personality, for the reason that in the last phase of the manipulation of the work a powerful relation with reality is an unconditional requirement.

Freud has designated hypnosis as a man consisting of two. According to Freud a mass springs into being when the various personalities of the mass identify themselves with a common leader. Identifications between the individuals of the mass make the latter more homogeneous. The identifications are transferred inward into the ego ideal; each individual bears in his ego ideal the traits of the persons with whom he identifies himself. The conscience is represented in the ego ideal. The most important identifications are those with parents, particularly with the father, who serves as the first intermediary of the demands of society. Here again we have subordination to a personality equipped with powers considered more or less omnipotent. In hypnosis also we again find this subordination, and the hypnotized subordinates himself to the hypnotizer in

a manner similar to the subordination of the led to the leader. We have every reason to assume that the mass's crystallizing forces of society are closely related to the homosexual basic instincts, with the modification that we have already set up in general with regard to the question of declaring infantile instincts and perversion instincts to be identical. One may, if one like—and no doubt it has been often done—speak of a suggestibility of the mass, if one consider the easy susceptibility through the affectivity, as well as the deviation from the norms of the approved ideal egos, which are characteristic of the action of the mass. The leader and—abstracted from him—the dominant idea would assume the rôle of the suggestor. Hypnosis viewed from this point of view is as a matter of fact a mass consisting of two. But we must not fail to recognize that hypnosis on the one hand presents profounder regression, while on the other hand it does not lie so close to the ego center as the phenomena of actual conviction, of actual enthusiasm which we must after all seek in the mass. In the last analysis, this difference is connected also with the fact that an essential modification of the ego ideal itself is involved in the psychology of the mass, which declares itself in agreement with the actions of the mass. In every great mass movement the ego ideals are reconstructed in identification with the leader and the remaining members of the mass. No such thing may be said of hypnosis. Hypnosis involves no reconstruction of ego ideals; it lacks—as we have already pointed out in comparing hypnosis with love[1]—that freedom from all reservation which is characteristic of the actions of the mass and of the persons it embraces. The hypnotized has surrendered himself only until further notice.

These considerations enable us to approach the much discussed problem of hypnosis and crime. If an essential portion of the personality is engaged in observation of a supervising character, which is the case in hypnosis, it is self-evident that only such criminal acts may be performed by the hypnotized on suggestion as are in accord with the demands of the total personality. Again and again we have pointed out that the power of the hypnotizer over the hypnotized person is a limited power. One might be tempted to assume a

[1]An attempt at investigating the psychosexual components in love and marriage and their relation to masochism and sadism, was made by me in a series of cases in which marital troubles had resulted in desertion and separation. It seemed to be a dominant factor in determining their ultimate relation.—Trans.

defective technique on the part of the hypnotizer whenever a medium retains a will of his own. But even Delboeuf has shown that the hypnotized person is by no means a tool without a will of his own in the hand of the hypnotizer, and that the hypnotized person retains his own will, his own attitudes and adjustments. Furthermore, we might state in the first place that it appears quite striking that there is not a single well accredited case of a real crime having been performed by a hypnotized person on the command of the hypnotizer and against the will of the hypnotized person. This is all the more noteworthy when we recall that hypnotizing became a very widespread practice after the conclusion of the war and was frequently demonstrated in public exhibitions, so that it may be assumed that a great number of persons carried out hypnotic experiments. This epidemic of hypnosis furthermore coincides with a period of lax conceptions of morality, a period of increasing criminality. The external conditions for crimes performed by hypnotized persons had therefore become quite favorable so that it is quite justifiable to draw inferences from the lack of a corresponding casuistry. It has also been pointed out, not without reason, that we have no guarantee that the hypnotized person in hypnosis, or as a result of the hypnotic order, will act in such manner as to assure a skillful performance of the crime. Delboeuf has contributed a number of very interesting observations in this field. In our exposition we are closely following the presentation of Wagner-Jauregg, as communicated by him in a public lecture. Grundmann, a barber's assistant, considered Wagner-Jauregg's statements to be erroneous and trained a sixteen-year-old girl, Marie D., whom he hypnotized repeatedly, to make an attempt on the life of Wagner-Jauregg, in order to prove the possibility of crimes due to suggestion. For this purpose, he gave her a pistol loaded with a blank cartridge and, after having impressed upon her in advance the fact that the weapon was harmless, ordered her to go to Wagner-Jauregg's flat and shoot him. Characteristically enough, the girl raised the weapon to discharge it, when the decisive moment came, but dropped her hand without having discharged the pistol.[1] In other words, this girl could not be induced to perform even this bogus crime. The reader will find the details of this case in Kogerer's detailed report. The attempt to make a person commit a crime was again completely unsuccessful in this case. The defects

[1] It is not certain that the hypnotized girl did not press the trigger; but the shot was not fired.

of the theory that crimes may be induced by hypnosis refer to laboratory experiments in which it was possible to induce hypnotized persons to discharge shots at other persons, etc. But we must not forget that the hypnotized person is always aware of the general situation, that he is conscious of the fact that an experiment is being made on him, and that he must be well aware that the hypnotizer is not inducing him to commit an actual murder, if the hypnotizer is a man of respected social position. We are therefore of the opinion that the hypnotized can only be brought to perform such crimes as correspond with a previously existing inclination on his part. Only the experiences of actual life could afford a final proof of the contrary view, for laboratory experiments are unsuited, in principle, for a solution of this question, for the reasons above stated. The objection may be raised to the point of view we have above advocated, that we have ourselves admitted the possibility of a transition from hypnosis into serfdom, and that of course there is no need of proof that a serf may be forced to perform crimes by his ruler. But serfdom and hypnosis have nothing in common with each other at bottom, as we have repeatedly emphasized. The fact that it may at times be possible to make use of hypnosis as a technical device in order to secure the subjection of a person does not alter the correctness of our position. Similarly, it would be incorrect to designate flirting as a *grande passion* merely because flirting may at times lead into a *grande passion*. And at this point we wish again to register an emphatic objection to the excessive extension of the conception of suggestion. We may only speak of suggestion in cases in which the individual accepts, under the influence of a certain person, thoughts, actions, etc., which oppose the normal constitution of his personality. Convictions not justified by the facts, and due to the influence of others, may not be designated as suggestion unless we wish to deprive the term suggestion of all sensible significance and permit it to become synonymous with persuasion, mental subservience, etc. People forget that it is indeed possible to point out transition stages between all these phenomena, but that suggestion remains after all a very definite psychic phenomenon, a type of mental attitude which is far removed from the types of mental attitude which we assume in the acquisition of convictions, wrong convictions or right convictions. By this method of obliterating essential differences, some writers have also assumed a personal relation between the hypnotizer and the hypnotized, to the extent of claiming that in intimate hypnotic *rapport* the relations of the hypnotizer to the hyp-

notized are nontransferable. In opposition to this view we must state with all emphasis that perfectly hypnotizable patients are in principle hypnotizable by anyone, in fact, that even a command from the first hypnotizer will not disturb hypnotizability by other hypnotizers. In courses of instruction we have had occasion hundreds of times to continue hypnoses begun by others, without in any way disturbing these hypnoses. In fact, it is actually characteristic of the hypnotized that he is prepared to assume his masochistic infantile attitude toward anyone, if only the vague outlines of the stereotyped image be complied with. The hypnotized makes no selection in the application of his tendency to make an individual hypnotizer, and he is even less fastidious than the hysterical patient is wont to be in his object-fixations. If in certain cases only specific persons may be endowed with the dignity of the hypnotizer, we are here dealing with an emergence of differentiated tendencies, which do not fundamentally belong to the phenomena of hypnosis. We might say also that the tendency to criminal activity is latent in all of us, and that hypnosis, owing to its ability to unleash the emotions may also unleash the criminal instincts. But here again everything depends on the central personality and the latter will decide to what extent an emotion shall be yielded to. Furthermore, only certain people become homicides when under the influence of emotion. It should not be assumed that the total personality may be so easily disorganized by an emotion. Even in cases of serious psychosis the traits of the individual personality still make themselves felt. The aggressive acts in the twilight state of epilepsy are frequently directed against such persons as are unsympathetic to the individual even when free from his obsession. In this connection we may also state that even in hypnotic fictive crimes the persons experimented on will discharge their revolvers only at such persons as are unsympathetic to them. Hypnosis may therefore be considered at best as a technical auxiliary device, and as one that is not of undisputed value, in the process of inducing a person to commit a crime (see also Friedlander on this point). Liégeois and Liébault advocate the contrary view, however.

A special place is occupied in hypnosis by the active and passive sexual actions. Hypnosis, as we have explained, is goal-inhibited sexuality, and we know that it is not a very far cry, as a rule, from goal-inhibited to fully developed sexuality. We also know that situations which at first afford only a slight suggestion of the erotic may—even outside the hypnotic state—cause the Eros to burst forth in open flame at an early moment. Our manacled sexuality is of

course only waiting for an opportunity to break forth. We may therefore go so far as to admit that the man or woman hypnotized may be more readily induced to perform sexual acts than other "crimes." But let us not forget that the very situation into which the individual enters with the hypnotizer may signify an outright consent or even a challenge to the sexual act—as, let us say, in lay hypnoses performed without witnesses—and that the total personality of the man or woman hypnotized is also of significance in the sexual act produced by the hypnosis. We do not believe that the use of hypnosis is a simpler way than seduction without the use of hypnosis, and we cannot consider hypnosis as anything more than a particularly noneffective technical auxiliary in seduction.

SUPPLEMENT

The Forensic Importance of Hypnosis

Sleep may be induced by hypnosis, and we need hardly to attempt to prove that a sleeping person may be more easily robbed, violated, or slain, than a person awake. Even this theorem must be qualified with the addition that both the sleeper and the hypnotized have a certain adjustment toward the total situation in spite of their comparative unconsciousness. We have stated above in detail our opinion of the crimes performed by the hypnotized themselves.

We may admit that the testimony of witnesses may be falsified by suggestion and hypnosis, but the practical significance of this circumstance will not be overestimated unless we needlessly extend the application of the term suggestion. The psychology of deposition is by no means exhausted with the conception of suggestion. It is entirely unjustified to speak of suggestion, in the case, for instance, of Johann Bertold (triple murder with intent to rob), which is cited by Forel, in which case the unfortunate attitude of the press and of the court provoked a number of false testimonies. We are here dealing rather with the psychology of reporting (the case is communicated by Schrenck-Notzing).

We shall later take up in detail the injuries inflicted on the hypnotized by injudicious methods.

A further problem is presented by the question to what extent

it is possible to obtain, from an accused person or a witness, by hypnosis, statements that may be fuller and more dependable than indications obtained outside of the hypnosis. Fundamentally, two cases must here be distinguished. On the one hand, we have the cases in which the person experimented on desires in his conscience the attainment of the truth, which is, however, concealed from him. This question coincides to a great extent with the problem of the elucidation of amnesias, since amnesias are, in principle, elucidable in hypnosis, although this does not mean that results may be obtained in every specific case, the possibility of a forensic utilization of material thus obtained can by no means be denied. But, it should also not be forgotten that testimony given in hypnosis has no inherent absolute content of truth; here also, in a discussion of the truthfulness of the testimony, the statements made in hypnosis must be verified by other criteria.

Let us now consider the second group of cases; cases in which the individual is either not interested in the ascertaining of the truth, or may even be directly concerned in concealing the truth; here we must first remind the reader that a conscious resistance to hypnosis—as explained above—does not, to be sure, preclude the possibility of hypnosis, but none the less makes it more difficult. In the long run, the instinctive wish will be the decisive element. Once hypnosis has been induced, we must reckon with the fact that extensive sections of the total personality retain their goals even within the hypnosis. We are not at all certain that we are not being deceived by the hypnotized person even within the hypnosis with more or less clearly conscious intention. In this connection an essay by Jacobi and an observation by one of the present authors may be mentioned, which is particularly calculated to bring out the unreliability of statements made by somnambulists. We occasionally encounter in our search for things which patients wish to keep concealed, an unyielding No, as we have already pointed out above. Yet, in spite of this, we cannot deny the possibility that persons who refuse to confess or make statements while conscious, may nevertheless have an inner urge to make the confession and that the psychic readjustment of hypnosis may thus facilitate, or open the way for, the confession. At any rate, it would not appear from these considerations that hypnosis has a great field in affording assistance to the courts in the search for truth. But it may on occasion be of value in performing subsidiary services.

Among others, Wagner-Jauregg mentions the possibility of a

criminal's causing himself to be hypnotized when already imbued with the intention of committing a crime, with the double purpose of overcoming his own inhibitions as well as of evading, completely or in part, punishment in case he should be detected. Such hypnoses with ulterior motive might be well compared with inclination having similar ulterior motive. But forensic casuistry has no data to furnish on this subject.

VIII

Light Hypnosis

Our theoretical exposition up to this point has been concerned entirely with profound hypnoses. It is now our duty to examine the question whether the superficial hypnoses which are of particular importance to the physician, as we shall have occasion to observe later in agreement with Hirschlaff, may also be understood on the same psychological assumptions. Quite apart from the fact that the boundary line between superficial and profound hypnosis is more or less arbitrary, as may be seen from our description of the phenomenology of hypnosis, the suggestive *rapport* between the lightly hypnotized and the profoundly hypnotized is essentially the same. This may be ascertained by later psychoanalyzing a lightly hypnotized person. We have only to add that the dynamic significance of the suggestive *rapport* on the body is obviously a slighter one in light hypnosis, particularly the dynamic significance of the influence on the sleeping apparatus. Yet it is quite certain that the setting in motion of the sleeping mechanism involves very important psychophysical adjustments of another kind. No doubt, on the one hand, the suggestive *rapport* with more archaic strata of the personality in sleep is facilitated, the capacity for hallucination enhanced, and the approachability of the vasovegetative mechanisms in the interbrain altered. Furthermore, sleep brings with it readjustments with regard to the phenomena of the memory, to which we shall have to give some attention later. We must, of course, in connection with the production of sleep, consider the condition of the sleeping apparatus in addition to the dynamic significance of the suggestive *rapport,* although this distinction is not easy to make in specific cases. It is well known also that sound sleepers are in general easier to hypnotize than poor sleepers. It is therefore necessary for us to consider the factor of the organic condition of a brain apparatus on which suggestion is operating, as one of the elements in the effectiveness of the sleep suggestion, as indicated above. To what extent vasomotor phenomena, peripheral secretion, menstruation, are capable of being influenced in hypnosis depends no doubt, among other things, on the condition of these vasovegetative functions in the midbrain,

the interbrain, and the hindbrain. Thus, the female patient of Heller and Schultz in whom it was possible to produce the formation of blisters by the path of suggestion, was also excitable in the highest degree in other vasomotor respects. A comparative independence of the various brain apparatuses with regard to psychic things may therefore probably be assumed, even though one function may have a very important indirect influence on another. Viewed from this point of view, it becomes of increased interest to consider the question to what extent superficial hypnosis may be of influence at all on the formation of ideas, the activity of conception, and the total psychic attitude of the patient and the hypnotized personality. We may here refer in principle only to the therapeutic problem of hypnotism, namely, to the fact that the suggested content which at first is located in the periphery of the psychic experience, only grdaually becomes incorporated with the total personality, no matter how profound the hypnosis may be. In therapeutic hypnosis, we are therefore concerned less with the profundity of the hypnosis as such than with its psychic profundity of stratum, or, in other words, with the transformation of the entire personality. Just as we must distinguish possession from hypnosis and regard hypnosis merely as a technical auxiliary device for bringing about possession, which may extend into profound psychic layers and truly encounter in some manner the very nucleus of the personality, even so therapeutic suggestion is merely a technical auxiliary device for a total process of transformation of the patient, which is, of course, diametrically opposed to the process of becoming a serf. Hypnosis in this sense, be it superficial or profound, is only a technical auxiliary device for the transformation of the total personality, and hypnosis and suggestion in this sense mutually abolish each other after the attainment of the therapeutic purpose, for by this path the difference between the true goals of the ego ideal and the goals obtained by suggestion has of course already disappeared. It is a fact of experience that the psychic process of transformation may also be attained by suggestion in superficial hypnosis.

IX

Amnesia

We have been obliged to ignore up to this point the problem of failure of memory with regard to experiences in hypnosis, since the fundamental psychological question as to the psychic adjustment of the hypnotized had not yet been clarified. Having now expounded our attempt at solution, namely, that hypnosis involves a form of transference, we may now turn our attention to the problem of amnesia with regard to the experiences in hypnosis. First let us state the fact in the case: A number of hypnotized persons have no memory of the experiences passed through in hypnosis.

For the most part it is the very suggestible patients who amnesize, but this rule has its exceptions in two directions. Many otherwise quite suggestible persons do not amnesize what was experienced in hypnosis; on the other hand, hypnotized persons are occasionally encountered who do not accept suggestions in hypnosis, who awake from the hypnosis with a start, open their eyes, become apparently quite awake and yet give evidence subsequently of complete amnesia. In addition to the spontaneously evident amnesia, there are amnesias which do not appear until express command to that effect is issued by the person conducting the experiment. Post-hypnotic commands are as a rule better executed if amnesia is present. Yet this rule is not without its exceptions. Even the hypnosis and profound hypnotic sleep are frequently amnesized. This experience will enable us to understand the observation, frequently made, that when a profound hypnotic condition intervenes between a superficial initial and final stage of hypnosis, the person experimented on will nevertheless state that he has been "awake" during the entire period of the hypnosis and can remember everything he experienced in the hypnosis. The consciousness of being awake here simply carries on the continuity between the nonamnesized initial stage of the hypnosis to the similarly nonamnesized final stage by way of a third lacuna of amnesic profound sleep.

The important question is to determine why spontaneous amnesia ensues after a previous hypnosis. We must first point out that profound slumber is suggested to the hypnotized, and that we rarely

have any recollection of events experienced in profound slumber. Even dreams, as is well known, are forgotten with extraordinary frequency. In order to explain the forgetting of dreams we might mention—if we regard the formal point of view as important—their fragmentary character. From the standpoint of content, this fragmentary character bespeaks a primitive impulsive life which tends to dissolve (release) inhibitions. In our explanation of hypnotic amnesia, we shall have to make use of the same assumption, but must emphasize the fact that, in accordance with our entire exposition, important sections of the hypnotic experience do not correspond with the experience of dreams, but present a preconscious structure which to a great extent corresponds to the structure of the waking experience. We have all the more cause to seek for the motive of amnesia, and this motive must be sought in peculiarities of content. Obviously, the hypnotized is ashamed of his infantile-masochistic adjustment and denies the hypnosis in order to conceal the adjustment. Very frequently, therefore, we find hypnotized persons indignantly denying that they have been hypnotized. Profound slumber is frequently denied (see above). To the same sphere of phenomena belongs also the fact that hypnotized persons who have released themselves in one way or another from their hypnotizer not only maintain that they never were hypnotized, but recount—as an evidence in support of this statement—all the events that took place during hypnosis, events that had apparently been amnesized. Perhaps facts of this type will also remind us that the hypnotized sometimes forgets in order to please the hypnotizer.

But the amnesia of hypnosis may also disappear in another manner. Not infrequently, the content of the hypnosis will reappear in a dream, although the patient may not always be able to indicate precisely the origin of this content. The content of the hypnosis may also come to light in the form of a spontaneously arising notion. Furthermore, post-hypnotic amnesia may yield as a result of persistent questioning, questioning accompanied by suggestive proceedures (such as laying the hand on the forehead or stroking the latter) and finally, amnesia may cease as a result of a new hypnosis in which case the content may either be awakened in hypnosis together with the simultaneous shout of an order not to forget the content of the hypnosis after waking, or the order may simply be issued in hypnosis that everything be remembered after waking. We may, therefore, state it as a principle that every hypnosis content may again be made accessible to the every-day consciousness by renewed hypnosis.

Lapses of memory after profound hypnoses precisely correspond, in their structure, to those encountered in hysteria and hysterical twilight states. It is self-evident that hysterical amnesias may also be eliminated by hypnosis. The original theory of Breuer and Freud was to the effect that traumatic experiences bring about a hypnoid condition which prevents the full coming to consciousness of the traumatic experiences—thus amnesizes the traumatic experiences. By being thus cut off from the consciousness, the traumatic experience only now attains its disease-causing effect. The theory goes on to say that the blocking of the consciousness constricts the emotion, the constriction of the emotion produces the hysterical phenomena. The emotion is thus transformed, by the path of conversion, into bodily, somatic phenomena. According to this view, amnesia is a prerequisite for the effectiveness of a traumatic experience. Now, in hypnosis, we have an opportunity to subject the Breuer-Freud view to the experimental test. We issue an order to the person experimented on in hypnosis, to clap his hands, after waking, whenever asked: "How do you do?" After waking, the person experimented on, to his own great amusement, tirelessly and repeatedly will clap his hands when the aforesaid question is put. After having recovered his memory, by hypnotic or suggestive means, he will cease clapping his hands in response to the question. The experiment does not always turn out so unambiguously as here indicated. At times the reaction will dwindle of itself; at times the post-hypnotic order is effective even though amnesia has not been present. The original Breuer-Freud formulation cannot therefore be a complete explanation.

This question is answered by the later developments of psychoanalysis, which considers infantile tendencies which have been inhibited and are now becoming effective, as the essential factor of hypnosis. The traumatic experience is of importance only to the extent that it awakens such infantile erotic adjustments. For the reasons above indicated, amnesia is very frequently connected with the traumatic experience, and may even facilitate its effectiveness, but surely is not the prerequisite for the effectiveness of the traumatic experience. On the contrary, only the impulsive adjustments of infantile life and the amnesias connected with them are of importance. It is their elucidation only that would involve complete cure, according to the later views of psychoanalysis. The original method of psychoanalysis was the so-called cathartic hypnosis. The patient is obliged, in hypnosis, to recall the traumatic scene;

once he recalls the traumatic scene, the inhibited motion is released, the individual is freed from hysteria. In the famous case of Anna O., under Brauer's observation, who is the point of departure for the entire subject of psychoanalysis, the symptoms disappeared whenever, in the course of the cathartic hypnosis, all the events had been uncovered which had found their expression in the hysterical symptom. The physician was obliged to proceed gradually from more recent to earlier occasions in which the symptom had appeared. Only after the first occasion had been determined, did the symptom disappear. The method of cathartic hypnosis is accordingly a systematic retracing of one's steps to the first cause.

Since hypnosis is based on infantile erotic associations (*Bindungen*) it is obvious that we cannot loosen by means of hypnosis precisely those infantile erotic *Bindungen* which are so important from the psychoanalytic point of view. Precisely that portion of the neurosis which we now consider the dominant portion, is not accessible to cathartic hypnosis. Let us add another thought to that just expressed, for the sake of completeness. In the material concealed by hypnotic amnesia, we are concerned in great measure, in fact predominantly, with material having a preconscious structure. But we know how decisive is the share of the unconscious mind in the origin of the neurosis. It will be possible for us to derive from the unconscious character of the experiences in hypnosis, the fact that cathartic hypnosis can have only a limited effectiveness.

It is already apparent from what has been said above that the content of one hypnosis is in communication with the content of the other hypnosis. We may state it thus: The foreconscious materials stand in communication with each other. A similar communication exists also, however, between the content of the peculiar hysterical conditions and hypnosis, and also between the various peculiar conditions themselves. We are thus entering on the transition to the famous cases of a so-called double consciousness. If we designate the normal state as the first state, the exceptional state as the second state (*état second,* P. Janet), the experiences of the second state may be united in an apparently closed personality in spite of the fact that the personality of the second state knows nothing of the personality of the first state. Similarly, the first personality may be completely deprived of any knowledge of the thoughts and feelings of the second personality. But the most varied fluctuations are conceivable. In some cases, one personality will know of the other while the other knows nothing of it. For we must emphasize the fact that

the experiences of the peculiar hysterical state which are not accessible to normal personality must nevertheless be contained in the psychic experience. They may either be beheld in a crystal held before the eyes, they may be experienced in dreams, or they may find their expression in the fact that words intended to refer to experiences from the exceptional state, produce bodily emotive reactions which cannot be understood from the experiences of the normal state. Prince and Petersen have shown by means of the psychogalvanic phenomena in a case of double consciousness that the person experimented on reacts emotively to those experiences of which he has apparently no knowledge. This leads us to the important question: In what manner are apparently forgotten experiences experienced? Are they really unconscious, or are they not present, after all, in the background of consciousness? Our observation of the conduct of somnambulous persons show that reality, though apparently not perceived, still reaches into the experiences of the hypnotized. We are therefore probably entitled to infer that in the waking state the experiences of hypnosis are in consciousness, though they be only in the background of consciousness, and that the same holds true of the experiences in the peculiar hysterical condition, particularly if we recall the facts described above. We are therefore of the opinion that even apparently forgotten experiences are retained in experience; not in the foreground, to be sure, but in the background of experience, and we imagine that the true personality remains in the background of the experience of the hypnotized, as we have been emphasizing throughout, and that the experiences of the hypnosis are in the background of the awakened personality. We are inclined to transfer this view without modification to the peculiar hysterical states and to the states of double consciousness. The amnesias of hypnosis are of extremely far reaching importance when viewed from general psychological angles. In the post-hypnotic order, the individual is carrying out an instruction without being conscious of having received the instruction. If asked why he has carried out the instruction the individual will either state he does not know why or—and this is very significant—his answers will very often be erroneous. Thus, a hypnotized man who has raised his umbrella in obedience to a post-hypnotic command, although the sky is clear. will perhaps say that he wished to protect himself against the sun or a person experimented on, who has clapped her hands in response to a post-hypnotic order will state that she was merely giving expression to her feeling of general well being, etc. There is a tendency

to find reasons for classing with the normal course of events such executions of post-hypnotic commands although they may frequently be quite different from the acts of normal every-day life. To what extent, of course, such a motivation, which is sometimes advanced in the form of an awkward subterfuge, is actually believed by the explaining person himself, and to what extent we are dealing here with an internally accepted statement, must remain an open question. Hypnosis therefore shows that we do not know the motives of our acts, and it is this profound recognition that is the foundation of psychoanalysis.

A few words are required on so-called post-hypnotic suggestion. If the individual in the hypnosis itself is determined by the adjustments of his own personality to carry out only such commands as may be made to appear to accord with the goals of his personality, we have a right to make the same assumption with regard to the post-hypnotic command. Certain authors actually assume that the hypnosis again comes to life during the execution of the post-hypnotic command, an assumption which is justifiable to the extent that in a number of such cases the persons experimented on actually do enter into a dreamlike state while executing the post-hypnotic order. In other cases, the person complying with the post-hypnotic order can hardly be distinguished from any other person carrying out an order, so that it would appear far fetched to speak of a renewal of the hypnotic state. However this may be, post-hypnotic orders are based in the last analysis on the agreement of the personality. Particular attention is deserved by those cases in which the person experimented on executes the post-hypnotic order with some variation, thus making the execution accord more perfectly with the demands of his personality than would have been the case had he carried out the order implicitly. Thus, we have seen cases of persons who had been ordered to clap their hands and who discharged this obligation by rubbing their hands and simultaneously making a faint motion of clapping, thus transforming the command into an expressive motion that was not very striknig. The reader will observe that in the last analysis all depends on the unit personality which in some manner always interferes with the individual acts and thus controls them. Amnesias of whatsoever kind are by no means a gap between the various experiences of the personality. The apparently forgotten material remains present in the personality. It merely is not so easily available. When therefore we find that the experiences of hypnosis are apparently forgotten, it is not a fact that the material

of experience has truly been lost or dissipated, in fact it remains ever present and is released again and again; it is merely not always accessible to the personality; it has been forced into the background; it has been pushed aside.

A question of the greatest importance is the question whether the knowledge obtained through the theory of hypnosis may have general application in the psychology of memory, and we must state to what extent this principle may be extended also to other disturbances of memory and to the phenomenon of forgetting in general. In the first place, let us recall that the literature of hypnosis presents a great number of astounding observations in which long forgotten material of experience has again stepped into the foreground under the influence of hypnosis. Thus Benedict tells of a military officer who suddenly began to speak a new language in hypnosis; it was Welsh, a language the officer had learned as a boy and later forgotten. The profound similarity between the spontaneous condition of trance and the phenomena of hypnosis finds an expression in the fact that a servant girl in a trance suddenly began to speak Aramaic, a language she had heard from her past when a child, without being conscious of ever having learned this language. It is apparent, therefore, that there is a very close connection between the forgotten material, on the one hand, and the condition of hypnosis and trance on the other hand. Forgotten material may therefore be brought back to the consciousness by the "normal" path by means of hypnosis. But this affords a decisive indication that the phenomena of memory in hypnosis may furnish an explanation of the normal phenomena of memory.

In this connection, we must mention, on the one hand, the investigations of the Külpe school, and on the other hand, the investigations by psychoanalysis. Since Ach's revelations we know that determining tendencies control the psychic life. These tendencies determine not only the material which comes to the surface and becomes conscious in ideas and thoughts, but they even make a selection among the material that has become conscious. The matter which is associated is determined after the manner of tasks, tasks which also determine the final utilization of that which has already become conscious. It is worthy of note that Ach also makes use of hypnotic experiments to support his point of view. The putting of problems necessarily involves the setting aside of materials not serviceable in the solution of the problem. Here again there is a pushing to one side, of course, in the wider sense of the word. In other words, there is an intelligent

factor in remembering and associating, which determines with intelligence the selection of the associated material. Psychoanalysis has filled this empty outline with the richness of life. Any fairly conscientiously conducted analysis will show that all remembering operates merely as an expression of instinctive adjustments, that all remembering is conditioned by the basic impulses. We are merely reformulating these discoveries, first announced by Freud, when we say that all forgetting takes place because of emotive factors, and that forgetting therefore is by no means equivalent to a destruction of memory material. Accordingly, Freud was able in one case to pursue his analysis back to the age of one and one-half years and to reconstruct (restore) a scene which had taken place at this age. If in the course of life we forget so many things, we forget them because we have no use for them, and because our interest cannot be held captive by their various details. In fact, we go so far as to assume that the various efforts to acquire knowledge and acts of reading which lead to the acquisition of a certain subject must necessarily be retained in the psyche in their individuality, and that they could be reproduced as a whole if it were possible to find pegs on which to attach the biological interest. It is apparent that the type of amnesia of hypnosis is the type of forgetting in general, and precisely herein lies its great importance. It might be urged against this view that there are also, of course, organically conditioned amnesias. Here we may mention investigations which have been going on for many years in our clinic.

Stern was able to restore amnesias in intoxicated persons even where the cases involved so-called pathological intoxications. We are here dealing evidently with an amnesia conditioned or favored by an organic factor, and which nevertheless may be illuminated by hypnosis. More significant is the fact that—as is shown by the investigations of Graeter, Muralt, and Riklin, as well as of one of the present authors—even the forgetfulness in epilepsy is restorable by hypnosis. Epileptic amnesia was and is considered as the very type of organically conditioned amnesia. Similarly, Schilder and Stern succeeded in restoring the retrograde amnesias of persons resuscitated after hanging, whose "organic character" has been proved by Wagner-Jauregg.[1] With regard to amnesias after cranial

[1] Of course we may not count on success in every specific case. We have often witnessed failures. But as a matter of principle we consider such amnesias as restorable. Even in the technically more tractable hysterical amnesia, the attempt at illumination occasionally fails, which does not give us any reason to alter our views on hysterical amnesia.

traumata, retrograde amnesias of traumatic cranial cases, we have not succeeded in bringing about a return in hypnosis. But the mode of restoration in a case reported by Righetti corresponded with the restoration of an hysterical amnesia, and the mode of restoration in a case of amnesia after cranial trauma, studied by Hartmann and Schilder permitted only of the inference that the memory material had not been destroyed as such, but remained preserved. It therefore appears that there is no class of organically conditioned amnesias that escapes classification from the point of view carried out here.[2] J. H. Schultz also advocates similar views.

What has been said above applies exclusively to lapses of memory, to amnesias, and we have no right to consider all disturbances of memory as amnesias. We are not concerned only with the forgetting of what was once learned, which we indeed justify in classing with amnesias, but also with the forgetting of an extremely recent experience, in other words, with what is ordinarily called the Korsakoff syndrome,[3] the disturbance of the power of notation. The first important hints in this direction are to be found in the studies on Brodmann-Gregor in the case of Korsakoff patients, which show that any material once learned can be relearned with less effort. No matter how grave may be the disturbance of the power of notation, some trace must remain, and we are perfectly entitled to ask to what extent this trace may be considered as psychic at all, whether we are not dealing here with a purely physical residuum. Some slight assistance is afforded by experiments by one of the present authors who has shown that the amnesic experiences of the epileptic state are relearned with a saving of effort after the cessation of the epileptic state. Similar is the case with material acquired during hypnosis. Now we know from the above data that experiences had in the amnesic epileptic state continue to be transmitted psychically. We therefore have at least the beginning of a proof that wherever an economy of effort is later attainable, psychic traces must also still be present. Of course, we are not presenting an inference of conclusive value, but merely a conjecture supported by analogy. We must state further, however, that, according to the studies of Von Betlheim and Hartmann, the material which replaces the forgotten material suffers condensations and displacements which have an extensive similarity

[2] Of course, only such material can be amnesized as has been perceived and absorbed. In stupor and unconsciousness, nothing is taken in. There is nothing to be reamnesized in such cases.

[3] Forgetfulness of recent events with tendency to fabrication.—Translator.

with the condensations and displacements in dream and hysteria. But we may assume that the apparently forgotten material is not truly destroyed either in dream or in hysteria. Thus we have a new indication of the probability that it will be possible to apply similar fundamental assumptions in the understanding of disturbances of the power of notation as in that of the amnesias. But we have now penetrated very profoundly into the realm of organic disturbances of memory and we may hardly be said to know what form of disturbances of memory should be declared as escaping, in principle, our mode of investigation. One might still object, at best, that in aphasias and in mind-blindnesses (agnosias) memory material is lost. But one of the present authors, following out suggestions made by Bergson, has shown that we have no right to speak of a loss of memory material in aphasias and agnosias. This is equivalent to the understanding that the disturbances of memory in hypnosis may facilitate the understanding of organic disturbances of memory.

Let us call particular attention to certain traits of disturbances of memory in hypnosis and to their restoration. We have already pointed out that in the dream or in random notions the memory material of hypnosis may crop out. Frequently without the individual's being aware of the origin of his memory material, without his being able to put this memory material into its proper spatial and chronological relations. This reminds us that we have similar notion concerning the amnesic states of epilepsy (Bonhoeffer) and also the spontaneous restoration of amnesias in cranial traumata. In general we must conceive the matter thus: The process of remembering is a process of progressive differentiation and the terminal point of this differentiation which goes back through a number of displacements and condensations to the forgotten material is the replacing of this material into its proper spatial, chronological and objective relations. Furthermore, in the course of this process of differentiation, details are occasionally differentiated while all else yet remains in the dark. Starting with these facts as a point of departure, we only now begin to understand what takes place in the restoration of amnesic gaps, even when the latter are of hypnotic origin. This restoration always occurs piecemeal or stratum by stratum. Nor are we ever fully protected against the interposition of distorted material among the restored gaps. The same applies also to the restoration of amnesic gaps of any kind originating in the course of pathological processes. The illumination of amnesic gaps may be of importance even in courts of law. If, according to Brauer and Freud, cathartic hypnoses be made

use of, the illumination will in turn be of particular importance. But here also one is of course never entirely protected against deceptions, whether these arise from the patient's " unconscious " or whether they be outright simulation. In this connection, we refer to an observation made by one of us in the treatment of a somnambulist woman.

Our section on disturbances of memory in hypnotized persons is incomplete to the extent that we have not yet mentioned the fact that very close relations exist between certain pharmacologic-toxic effects, sleep, hypnosis, and memory. In the first place, we must mention that material long forgotten frequently crops up again in sleep. It is too well known that in an intoxication the experiences of an earlier intoxication may again be recalled, to require any further emphasis on this point. Finally, soporifics have been of excellent service to us in the elimination of stubborn amnesias. We must therefore assume that the profound sleep system has very close relations with the memory systems. We have again and again pointed out that this system also is closely related to hypnosis. A number of further questions connected with the effects of soporifics as well as with their relation with the primitive motility and with the relations to schizophrenia, must still be discussed in this book.

X

The Physiological Theory of Hypnosis.

Particular interest attaches to the question of hypnosis in animals. It is well known that a number of animals can be put into a condition which corresponds at least in many external earmarks to that of hypnosis in human beings. Such conditions may for instance be induced in the common crawfish and also in mammals. The means of bringing animals into the hypnotic state is to retain them in uncomfortable positions. The hypnosis of animals (Pryor) has been traced to terror and use has been made of the term *terror rigor* (*Schreckstarre*) or cataplexy. Forel, not without reason, raises the objection that precisely the tamest animals are the easiest to hypnotize. He is inclined to speak of true suggestion. No doubt a psychic factor is present in hypnoses of animals. Now Verworn has shown that the reflexes produced by retaining the animal in unaccustomed and inconvenient situations are tonic recumbency reflexes. He is wrong, to be sure, when he infers that animal hypnosis is therefore without a psychological phase, for animal hypnosis may indeed depend on the one hand on tonic recumbency reflexes and yet have, on the other hand, a psychological foundation. "Psychological" and "physical" are by no means opposites, and we must again emphasize, with Bleuler, that it is necessary to say: "Physical and psychical" and not "physical or psychical." It is worthy of note that according to Mangold, who has summarized all the literature on this point, hypnosis may be brought about even in birds and mammals having no cerebrum. Spiegel and Goldblom have recently gone so far as to show that the phenomena of hypnosis may be brought about if only the center of the posture reflexes, the red nucleus, has still been retained. In other words, as long as the animal is capable of any changes of posture at all, it may be induced by the procedures bringing about animal hypnosis to refrain from carrying out these alterations of posture. Now we must apply even to the experimental results in the cases of animals, the general point of view that the removal of a section of the brain may under certain circumstances cause functions to live again in more primitive sections of the brain which in their normal functioning had not been

utilized or at least not to the same extent. In other words, if, after the removal of a certain section of the brain a function suffers no alteration, such experiments do not show that the removed section of the brain has no importance for this function. But it is none the less noteworthy that the hypnosis of animals points to the fact that much of what we are otherwise accustomed to ascribing to hypnosis takes place in primitive motor centers.

Still greater are the difficulties encountered in recognizing hypnosis in invertebrate animals. As a fundamental principle we may distinguish two types, namely a hypotonic and a hypertonic type, in other words, the same types that are found in the hypnosis of human beings, particularly noteworthy is the following observation, communicated by Mangold (according to Heymans). In the ugly weasel spiders of the species *Galeodes Kaspius turcestanus,* the female attempts to devour the wooing males; the female will not permit the performance of the sexual act unless the male succeeds in imbedding his forcipated jaws in a certain spot of her abdomen; the hypnotic condition of the female may be imitated in the laboratory by seizing the above mentioned spot of the female with the pincers though, characteristically enough, this experiment can only be performed in the mating season. Mangold himself is inclined to consider animal hypnosis as a device in the service of sexual instincts, and it may indeed be surmised that hypnosis and a condition resembling hypnosis always ensue in the course of sexual relations, when the resistance of the female begins to be excessive and seriously to endanger the actual performance of the sexual act. Mangold distinguishes between hypnosis and the reflexes of simulated death (trance) which are rather calculated to serve to protect the specific individual. But we must recall that hypnosis undoubtedly has a connection with sleep and that these connections may hardly be disposed of by reference to sexuality alone. Furthermore, there must be certain bridges between sleep and trance, for the examples communicated by Zell showing that sleep ensues in the animal world when the animal would incur danger by continuing its motions, seem to constitute an excellent formulation of a portion of the problems. Certain relations will therefore have to be assumed nevertheless between sleep on the one hand and trance reflexes and hypnosis on the other hand. Of course, in order to find an analogy to the social-psychological side in animal hypnosis, more thorough investigations will still have to be made in order to determine the conduct of animals when not under human influence. Freud, no doubt rightly,

points out in Group Psychology and the Analysis of the Ego that we must take into consideration, in interpreting the hypnosis, the fact that the leader must not be obliged to reckon with a continuous resistance. In animals which live in communities, also, the superiority of the leader of the tribe may be valuable only if he need not give evidence of his authority on every new occasion. Schjelderup-Ebbe has shown in the case of birds that relations of superiority and subordination are found in the animal world. "Intimidation" is often a decisive factor, and once an animal has become a tyrant over the others, this condition will continue to exist without special exertion of effort even though the balance of power be by no means in favor of the tyrant. A consideration of hypnosis in animals may, to be sure, not afford us a final answer to the question of human hypnosis, but it does raise a number of important problems.

Not long ago Trömner tabulated the differences between animal hypnosis, which he designates as catalepsy, and human hypnosis. We are giving this tabulation below and commenting on it because we believe that a controversy between us and this distinguished worker will enable us to present our own view more clearly:

CATALEPSY	HYPNOSIS
1. Produced by shock.	1. Produced by suggestion (ideas).
2. Spontaneous liberation after a short period.	2. Awakening not spontaneous, except from subsequent sleep.
3. Only motor restraint.	3. Medium phase between somnolence and amnesia.
4. Occurs even in animals lacking cerebrum.	4. Catalepsy, to be sure, in weak-minded persons, but no hypnosis.
5. Weakens or vanishes on frequent repetition.	5. Greater profundity of hypnosis on repetition.
6. Possible even in new-born individuals.	6. Hypnosis becomes possible only on the attainment of relatively advanced intelligence (not before fifth or sixth year of life).

Note on 1. Shock proceeds in some kind of relation with psychic experiences. In human beings also there exists a sort of hypnosis through domination and terror. It is true that in the production of human hypnosis the material of conception is of particular importance, but we have again and again pointed out that there are a number of phenomena in hypnosis which are independent of the activity of the imagination.

Note on 2. Animal hypnoses may also last for some time. As a principle it may be stated that human hypnosis likewise ends in a shaking off of the hypnosis, not to mention the light degrees of human hypnosis; but a spontaneous awakening ensues after a more or less protracted period even in profound hypnosis.

Note on 3. Whether the motor restraint in animals is exclusively motor in nature, whether it is not connected with psychic changes, is an open question. We have already pointed out that in the hypnosis of humans there are times when only motor restraints control the picture.

Note on 4. Hartmann and Schilder have also succeeded in obtaining hypnotic phenomena in the case of insane paralytics, as will be mentioned later.

Note on 6. Even though we are not in the habit of speaking of hypnosis in the case of very young children we must nevertheless point out that the procedures by means of which a crying infant is pacified, namely, rhythmically repeated stroking, gentle admonition, etc., the procedures that induce sleep in the infant, are the same as those used in bringing about hypnosis. We entirely agree with Trömner when he says that the hypnosis of humans and the hypnosis of animals must necessarily be of different nature owing to the difference in their brain construction. Yet, the common elements are so significant that we must assume a certain identity in principle. This identity is recognized even by Trömner to the extent of his considering hypnotic catalepsy and catalepsy in animals as of similar nature.

Let us now begin our discussions of the physiology of hypnosis with a discussion of catalepsy and of the motor phenomena of the hypnotized. One of the present authors has already pointed out [1] that the cataleptic phenomena of hypnosis present a fundamental similarity with those phenomena afforded by the lesion of the striopallidary system. The catalepsy encountered in certain cases of *encephalitis epidemica* (compare Gerstmann and Schilder on this subject) shows very great similarities with the catalepsy of the hypnotized, which, as is well known, is characterized in general by the fact that the posture is maintained with as slight an expenditure of muscular contraction as possible. The expression *striopallidal system* is incorrect to the extent that we are as yet not in a position to estimate the importance accruing to the *striopallidal system* as such in

[1] "Das Wesen der Hypnose," Seele und Leben.

this reaction, or the importance of the *substantia nigra,* or of the cerebellar systems. If one would undertake to make a thorough study of the problem of catalepsy, one must not forget that there are essentially two components of catalepsy involved. On the one hand, there is (akinesia) a defective locomotion urge, or a defective locomotion will; on the other hand, there is the muscular tonus which is necessary to maintain the communicated passive position. The doctrine of the striopallidal origin of hypnotic catalepsy has recently also been advocated by Leyser.

One of the present authors has in part repeatedly emphasized, in his work together with Gerstmann, the fact that such modes of viewing the question are of fundamental importance for the theory of the muscle tonus and of the striopallidal system. In this case, on the one hand, the considerable susceptibility of disturbance of striopallidal motility by psychic factors must be stressed, and on the other hand the muscular phenomena consequent upon purely psychic adjustments, with purely psychic condition reflexes. Thus, Kauders has described images of psychogenically conditioned disturbances of motility which correspond to far-reaching parkinsonisms.[1] We cannot lay sufficient stress on the questions thus arising, which begin with the fundamental investigations of C. and O. Vogt and Kleist. The important continuations of these suggestions by F. H. Lewy and Homburger promising to throw considerable light on the question of motor experiences and behavior in general, even in normal persons. Again and again stress must be laid on the close connection between psychic experience, on the one hand, and the motor type and motor expression, on the other hand, which has its center in the striopallidal system.

But the physiology of the attitudes and of the motility of the hypnotized is by no means exhausted with the considerations advanced above. Goldstein and Riese were the first to point out that the attitude and posture reflexes of Magnus and DeKleijn can be detected also in normal man. As Goldstein and Zingerle have emphasized, there are cases in which automatic movement (*Abläufe*) follow upon an alteration in the posture of the head, and prevent

[1] A girl of fifteen is at present under my observation and treatment for a condition of hypertonia of her right upper and lower extremities and is suggestive of a decided parkinsonism, though she was considered for a long time to be a case of hysteria. Hypnotic suggestion has very decidedly influenced her condition for the better though the hypertonic attitude still remains.—Trans.

the individual from attaining repose. Hoff and Schilder were able to confirm this. Simultaneously with the proceeding of these involuntary movements (*Automatöse,* Zingerle) remarkable changes ensue in the state of consciousness. Between these movements and the state of consciousness there are connections whose nature has not yet been cleared up. We must assume that we are dealing with posture reflexes and their consequences, whose center is found in the red nucleus, at least in animals. Now, we have called attention above to Spiegel's investigations, which show that hypnosis cuts off the posture reflexes. Accordingly we may expect that the posture reflexes suffer a similar change in human hypnosis. This assumption is confirmed by experience, at least to the extent—as shown by Levinger—that the posture reflexes in hypnosis are actually considerably diminished in hypnosis, a statement that has been fully confirmed by Hoff and Schilder. We may state in explanation of these conditions that the muscular tension during hypnotic sleep is very slight and that a certain amount of muscular tension seems necessary in order to produce posture reflexes in general. On the other hand, however, it would be wrong to underestimate the akinetic factor in hypnosis. We thus attain the view that the stimulus to motion in hypnosis has been switched off also in those strata which serve for the production of posture reflexes, or automatosis. Here again we may point out that in the greater number of akinetic encephalitics position and posture reflexes are also reduced or absent. We thus find that we are already in a position, in view of the material now available, to form certain ideas on the physiology of motility in hypnosis. Let us here recall also that it will be best possible for us to understand the motor stimulus phenomena observed in hypnosis, the hysteriform convulsive twitching, even the occasional hysterical attacks, if we bear in hind the removal of the inhibitions over primitive motility. The thought that so-called psychogenic disturbances of motility may here be conceived as physiological goes back to Meynert, but has obtained a more precise formulation only since the investigatoins of Leipman, Kleist, C. and O. Vogt, Gerstmann and Schilder, and Leyser.

Above we have already declined to dwell on the details of the question of how the primitive motility is interrelated with the more highly developed motility, and how the two coöperate. Also, we must mention the problem involved in the fact that the primitive motility is closely related with the vasovegetative system. We refer the reader to F. H. Lewy. At any rate, we maintain our position

that the functioning of motor apparatus of comparatively primitive structure is of importance for the motor phenomena of hypnosis, the apparatus being located in the midbrain, interbrain, and hindbrain.

We have already spoken of an influencing of the sleep center. There is no doubt that the latter is situated in the neighborhood of the third ventricle, as we have stated above. But the neighborhood of the third ventricle happens to be also the location of the central station of the vasovegetative functions in general. Here lie the centers for the regulation of temperature, for the bladder, saliva, respiration, sexuality, metabolism, and the glands of internal secretion. As for the individual data, we refer to the article by Müller and Greving which appeared recently in the *Med. Kl.* Müller and Greving point out that stimulations of the sensory neurones, proceeding from the optic thalamus, pass over to the vegetative system, that the pupils dilate owing to the pain, and that saliva and perspiration are secreted as a result. The stimulus therefore evidently is conducted to the interbrain. We now quote literally the statements of these authors: "Thus, we know that Karplus and Kreidle succeeded in obtaining a protrusion of the bulbus, a dilation of the pupils and the eyelids, increased lachrimal, salivary, and perspiratory secretion, by stimulating the subthalamic region. Aschner and Leschke secured polyuria, with unconquerable thirst (*diabetes insipidus*) and temporary glycosuria, by pricking the floor of the third ventricle and avoiding the hypophysis. Jakobi and Roemer were able to obtain an increase of bodily temperature by introducing carbolic acid or mercury into the infundibulum. Isenschmidt and Krehl excluded the regulation of the bodily temperature by a frontal incision behind the optic thalamus. Erdheim observed, after diseases of the infundibulum, though the hypophysis remain completely intact, an atrophy of the sexual apparatus and a lowering of the sexual desire and sexual power, a cessation of menstruation, and a retrogression of the secondary sexual traits, together with a marked increase in adipose tissue all over the body (*dystrophia adiposogenitalis*). In some diseases of the walls of the third ventricle we obtain only disturbances of the sexual apparatus, or only obesity. Many grounds speak for the assumption that the superior center for sexual and procreative activity is to be found in the *corpora mamillaria*. . . . It seems reasonable to assume that the walls of the third ventricle contain the spot which regulates the metabolic processes of the body. Not only from the ensuing of obesity after injuries and the formation of scars in the infundibulum, but also

from the enhanced combustion processes in fevers, which are stimulated from the temperature center, and from the serious conditions of wasting, such as appear in many cases of chronic hydrocephalis of the third ventricle, particularly in connection with *meningitis, cerebrospinalis epidemica.* Enlargement of the epiphysis, which also belongs to the interbrain, not only result in pathologically premature development of the sexual organs and the sexual desire, but also—probably by stimulations of the ventrical walls—to abnormal appetite, to polyphagia. Thus we find that not only thirst, but also hunger, may be produced by the vital centers in the central gray matter. Some investigators place the vasomotor center in the *corpus hypothalamicum* under the optic thalamus, in the *corpus Luysii.* From this region, according to certain authors (Liechtenstern), the subcortical stimuli to the bladder innervation take their origin. The innervation centers for the sebaceous glands must also be sought medically from the *globus pallidus."* We must also pay close attention to the report of Dresel and the book of F. H. Lewy, in which there is a discussion of the fundamentally important question of whether the vegetative apparatus is constructed in a number of levels. Dresel and F. H. Lewy assume that there is a superior level above the vegetative centers in the medulla oblongata which must be sought in the environment of the third ventricle in the nucleus periventricularis and in the centers of the interbrain region. Centers situated in the striopallidal system would then appear to take care of the delicate adjustments. The authors follow out these thoughts in great detail with regard to the regulation of sugar and temperature control. Thus, they hold accountable in *diabetes mellitus,* a spot in the pallidum, for the disturbances of sugar regulation, a view which is, however, contradicted by Bielschowsky. Whatever be our judgment of these things as far as details are concerned, there is no doubt that there is a succession of levels of the vasovegetative apparatus. It may also be assumed with certainty that mechanisms are situated in the midbrain which regulate the production of the endocrine secretions. In this connection the question as to the centers for sexuality is of particular importance. It has been already settled that centers on the floor of the midbrain are of essential importance in the production of *distrophia adiposogenitalis.* It is probable that the hypophysis and the interbrain have an influence here also. As for details, we refer to the textbooks on internal secretions by Biedl and Weil. Similar considerations will also be of importance, probably, in the case of *diabetes insipidus.* The posterior lobe of the

hypophysis and the vegetative centers at the floor of the interbrain are the organs that are of importance in this connection. We may therefore say that the vegetative functions in the interbrain have a central localization, and that it is from this central point that the vegetative life is supervised. This central station has control of a more primitive center situated in the medulla oblongata, but is probably also connected with stations of higher level. There is no doubt that the functions of the cerebral cortex must be extremely susceptible to action proceeding from these centers, as Reichhardt especially has repeatedly pointed out. Every experience of psychic type connected with the cerebral cortex accompanies in some manner the functions of the vegetative system. The latter vibrates together with the function of the cortex. Now we have every reason to assume that the vasovegetative system has preserved a greater degree of plasticity than the cortical function. Its function appears to have been differentiated in less degrees. Kraus speaks of a vegetative *Tiefenpersönlichkeit*.[1] To be sure, we should not forget that this vegetative *Tiefenpersönlichkeit* is by no means a psychologically unambiguous conception. The events of the vasovegetative system must interfere in every cortical function, in every psychic happening. To be sure, the affectivities appear to be bound in some special manner to the interbrain, and every more primitive experience appears connected with a stronger resonance to the vasovegetative mechanisms. This is already suggested by the investigations of the so-called physical expression of the feelings, a term that might perhaps better be replaced by the "expression of the bodily manifestations of affections. For, in addition to the emotional phase, the conceptual imaginative intellectual phases to which the emotion is attached are always important, and we cannot understand the results obtained by Pavlov and Heyer, who show that the character of the object presented will determine the character of the secretion of gastric juices, if we limit our consideration to the emotions only. (Compare, in this connection, the statements made by Schilder in Schwartz's book.) We may indeed say that in general the vasovegetative phenomena become more extensive with a decreasing in the cortical function and with its becoming more primitive. Wherever the affective mechanisms come into the foreground the cortical function presents more primitive traits. Dislocations, condensations, defective differentiation of details ensue, and modes of thought familiar to us

[1] Depth personality.

from the primitive state and from childhood put in their appearance. We may say, by way of abbreviation, that a fully developed cortical function is connected with clearly defined images which are productive of expedient action, and that this cortical function will regress to a primitive stage if the vasovegetative phase becomes more pronounced. We may, if we wish, take as our point of departure the experience, proved by psychoanalysis, that thought characterized by condensations, displacements, and symbolic formations corresponds to an ontogenetically and phylogenetically earlier stage of development. We must furthermore be perfectly clear as to the fact that affectivity, instinctive impulses, are the inalienable possession of all the living matter which, owing to its profound evolutionary roots, has its seat in the deeper sections of the brain. But after what we have already stated, it is clear that hypnosis applies itself to strata of primitive impulses. The attitude of the suggested person, in its goal-inhibited masochistic trend recognizing authority in a magic degree, is very evidently archaic and represents a primitive experience. It should not surprise us to learn that this attitude has particularly close relations with the phylogenetically deep-lying vasovegetative system. The effects of hypnosis are predominantly in the vasovegetative realm. We thus find that the results of psychological analysis have the closest possible relation with the results of physiological analysis. Both point to the fact that we must behold in hypnosis a primitive, archaic regressive phenomenon.

We therefore hold fully the view that the phenomena of hypnosis must be understood on the basis of the psychology and the psychophysiology of the hypnotized. Alrutz thought it possible to show that an emanation proceeds from the hypnotizer which has a direct physical influence on the hypnotized. We have not observed any phenomena that would justify such a conclusion.

XI

Technique of Hypnosis

Before we proceed to a description of the technique of hypnosis we must make the following fundamental observation. It should not be forgotten whether the purpose of the hypnosis is therapeutic or merely experimental. The objects and aims of therapeutic hypnosis are of course entirely different from those of experimental hypnosis. Superficial hypnosis, which is therapeutically of such great importance, offers but slight interest, comparatively speaking, from the point of view of the experimenter. While the therapeutist will in many cases make no effort at all to deepen the hypnosis, the experimenter has every reason to desire the attainment of a profound hypnosis. The latter must therefore apply every means calculated to render the hypnosis more profound. The therapeutic hypnosis may of course be a profound hypnosis, either from the very start or on the application of more emphatic means. It is impossible to stress sufficiently the fact that the therapeutic purpose of an hypnosis may be jeopardized by any effort that is not concerned purely with healing. Therapeutic profound hypnoses should therefore not be used for hypnotic experiments, as the latter are always recognized by the patient as in some way experimental and are made the subject of an internal evaluation, which place the patient in a position with regard to the hypnotizer which is not favorable to the therapeutic end. The hypnotizer should always bear in mind that he is responsible to the hypnotized for everything that occurs in hypnosis, and that the covering by means of amnesia is never complete. We shall begin the following discussion with a consideration only of the technique of therapeutic hypnosis, and shall not take up the question of experimental hypnosis until we have presented a picture of the therapeutic hypnosis.

Our normal procedure in this technique is as follows: The patient is recumbent in the most comfortable possible position, and is first enlightened by means of a short explanation of the nature and significance of hypnosis. We then usually say something like the following: "By yielding calmly to the words of the hypnotizer and trying not to offer any internal resistance, you will attain a condition

of internal repose which may lead to a condition resembling that of sleep, perhaps to sleep itself. In such a state, the effect of my words on you will be stronger. You will be more receptive to my words." We make use of this formula in instructing the patient, as a rule, when we are not convinced of the absolute necessity of a profound hypnosis. If the latter appears necessary, we assure the patient most emphatically that he will certainly fall into a profound sleep. A number of patients express fear of the hypnosis. It is important to speak to the patients concerning the causes for this fear. The patients abhor the possibility of being unconditionally subjected, under certain circumstances, to the hypnotizer. On the basis of our remarks above they may easily be calmed. In a number of cases the fear (desire!) of violation may have some weight, and this attitude is not eliminated by the presence of third persons. As a rule, a few words of explanation will suffice. These preliminary discussions as a rule enable one to get the patient into a condition of mind which makes him more accessible to hypnosis. As a rule we have him fixate a key or some shining object, step behind the patient, and begin saying to him, while stroking his brow gently and uniformly, the following: "Your eyelids are becoming heavier and heavier, you are getting tired, dull, and more and more sleepy. You feel your limbs growing heavy. Your fatigue becomes greater and greater. You feel as though you were going to sleep. Everything becomes obscure before your eyes. You can no longer keep your eyes open. You are in a condition of absolute, complete repose. You are breathing calmly,[1] deeply, and uniformly. You feel you are going to sleep." For several minutes (from two to four) we repeat this formula, or one like it. If the patient's eyes do not close of themselves we then press down the lids with a gentle pressure and say, sometimes in a commanding voice: "You are closing your eyes and are keeping your eyes closed." It is a mistake to have the patient fixate the object too long. Once he has closed his eyes of his own accord or on our more or less emphatic order, we continue the stroking of his brow and the repetitions of the formula in a uniformly convincing but not too loud voice, and then add, when it is our impression that the necessary depth of hypnosis has been attained, the suggestion we have in mind. It is in any case undesirable to offer any suggestion

[1] A method of enhancing the rapidity with which the hypnotic patient falls asleep is to have him breathe deeply, raising the hand of the operator placed on the patient's abdomen. The abdominal breathing thus causes fatigue and desire to relax and fall asleep quickly.—Trans. method.

to the patient in the earlier sessions which may lead to a negative result. As a rule it will be sufficient to suggest to the hypnotized, while gently stroking his arm, a feeling of warmth in the arm. If one has the impression that the hypnosis is a deep one, one may also pronounce a number, without previous preparation. (Sometimes the patients, after waking up, can be convinced that they have actually been in a profound hypnosis only by making reference to this number.) Then the suggestion[1] is made which is intended to have a therapeutic effect. This suggestion, as will be stated in detail later on, should be formulated very carefully and repeated several times. The awakening from the hypnosis should never be sudden, but always slow and tactful. We say to the patient: "You will gradually awaken from the hypnosis. You will feel quite fresh and cheerful after your awakening from the hypnosis. You will not have any dizziness or headaches." This suggestion should also be pronounced several times, to have effect. Finally we say to the patient: "I shall count three; when I have counted three you will wake up." We then slowly count three.

Having thus concluded the hypnosis, we now at once ask the patient as to his experiences and feelings during the hypnosis. If the hypnosis was a superficial one, the patient will in most cases state that he has heard everything, has not been asleep, and only felt a little tired, perhaps also with a feeling of heaviness in his limbs. In most cases, also, even in otherwise very superficial hypnoses, he will state that he had the sensation of warmth. He will remember the number if the hypnosis was superficial.

Very frequently the patient is disappointed by a superficial hypnosis of this kind and will state expressly that he has heard everything, that he was particularly disturbed by this sound or that, that it was impossible for him to suppress his thoughts, etc., etc. It is particularly important, in cases that do not require a profound hypnosis, to assure the patient with calm firmness that the depth of the hypnosis attained has been sufficient for the desired purpose, but that it may be possible in the later hypnoses to attain a profounder stage of hypnosis.

Many patients do not even attain the depth of hypnosis above described. But after rising from the sofa they show dizziness, head-

[1] The duration of time for superficial hypnosis before "suggestion" is given should not be protracted too long—fifteen to twenty minutes will suffice in most cases. Allowing the patient to sleep after the suggestion is given increases the effect of the suggestion.—Trans.

aches, stagger a little, and then experience a feeling of fatigue and heaviness. On the basis of such undesired concomitants it is possible frequently to explain to the patient that his state nevertheless gives evidence of a certain susceptibility to hypnosis.

In general, we do not as a rule attach overmuch importance to the external circumstances. As a rule it is not at all necessary to exclude all auditory sensations or darken the room. To be sure, cruder stimuli are kept out. Yet it is important that the persons to be hypnotized should understand that the most essential element is their own attitude.

And as a rule the hypnotic condition becomes more profound at each session up to the third or fourth hypnosis, without any particular auxiliary methods.

The more simple devices for making the hypnosis more profound may be mentioned: The patient may be ordered to stop blinking as far as possible. It seems that this effort enhances the ocular lassitude (Federn), and we know also that sleep begins with the eyes, and that Mauthner arrived at correct notions concerning the localization of the sleep center by reason of his observation of this circumstance.

Distributing the hypnotic procedures over a long period is frequently accompanied by success. Particularly to be recommended is the fraction method of O. Vogt. After the first process of hypnosis is passed, and the patient has had certain sensations in hypnosis, the experienced sensations are made use of as an auxiliary for further suggestions, and a more or less extended series of individual hypnoses may be carried out in the same session. It is then possible to attain quite profound depths of hypnosis within the same session, which would not have been so easy to attain by other methods.

At times it is possible to strengthen the hypnosis by proceeding from catalepsy. One of the few interferences not directly required by the therapeutic purpose and justifiable during the hypnosis is to raise the patient's arm. In profound hypnosis, the arm will either remain cataleptic or drop back absolutely lax. A direct order may be given to the patient, resulting in his retaining the arm in an uncomfortable position, which quite frequently has an enhancing effect on the hypnosis.

In view of the ease with which muscular suggestions are followed as a rule, the experiment may sometimes be made of moving the patient's hand to his head and now assuring him explicitly that he cannot take his hand away from his head. Such a procedure, how-

ever, like the suggestion, "You will not be able to open your eyes now," is expedient only when it is absolutely necessary to deepen the hypnosis for therapeutic reasons, for there is always the danger that the patient may insist on carrying out the motion which has been represented to him as impossible. Thus, many patients, on being told they cannot open their eyes any more, will stare wide-eyed at the hypnotizer, which of course does not help the situation at all.

In many cases a continuing of the strokes over the arms and over the entire body is of some advantage, yet we are extremely sparing in our use of this device, for we avoid, as a rule, everything that might transform the goal-inhibited sexuality in hypnosis in a goal-conscious sexuality. Not for reasons of prudishness, but because the unleashing of the sexuality in hypnosis is therapeutically by no means desirable, and involves the danger that the therapeutic *rapport* may become entirely dependent on manifest signs of affection on the part of the hypnotizer. One of the reasons why we cannot recommend the method of fascination, namely, hypnotizing with the eyes, is in the fact that the eye to eye hypnosis involves too pronounced an emphasis of the erotic moment in hypnosis. To this statement we should like to append a short theoretical observation. In the minds of simple persons the erotic use of the eyes is an essential component of hypnosis. As we have said, we are not accustomed to making use of the method of fascination. Yet one of our female patients stated that for some time after the hypnosis she continued to see the "black" eyes of the hypnotizer before her eyes, against her will.

One of the most essential means for bringing about profound hypnosis is that of hypnotizing other susceptible persons in the presence of the patient. It becomes perfectly apparent that hypnosis in this sense is a phenomenon which is closely related with those of imitation, identification, social communion. Particularly good results are obtained in the production of profound hypnosis if the patients are hypnotized in series, and preferably by interspersing a few good mediums among the group. The results obtained by Wetterstrand in the field of profound hypnosis may be explained by the fact that he was making use of this group method.

The attainment of profound hypnosis may be particularly facilitated by means of soporifics, concerning which we shall speak later in the proper place.

Our own attitude as physicians causes us to avoid in principle hypnosis by intimidation, by shouting at the patient, frightening him,

etc., and thus forcing him into hypnosis. In the hypnosis itself we do not select the hard, severe, brutal procedure, but rather the path of calm, firm persuasion. Of course, it is not possible to set up a hard and fast rule. During the preparatory stage of the hypnosis it may perhaps be necessary to put down the patient's laughter by energetic discipline, by shouting, etc. If we obtain the impression, during the profound hypnosis, that the patient is about to free himself from the hypnotizer's influence, emphatic measures, perhaps even an immediate awakening from the hypnosis, become absolutely necessary. And now we arrive at the point where we may discuss the important therapeutic problem, the manipulation of profound hypnosis.

While in superficial hypnosis it is sufficient as a rule to formulate the question plainly and to repeat it several times, we must count, in profound hypnosis, on the possibility that the suggestion may not be perfectly understood. For cases of profound hypnosis are at least in part cases of a dream-like transformation of consciousness. The best protection against such a possibility is to have the patient himself repeat the content of the suggestion. If we are dealing with amnesic patients, it is not sufficient to content oneself, in principle, with a mere enunciation of the suggesting formula. Otherwise there is a danger that the patient may not know what has been said to him at all. The fact that patients frequently make an effort, while under profound hypnosis, to break contact with the hypnotizer and to live out their own complexes, has already been mentioned by us several times. The best way of guarding against such an eventuality is that of not continuing the first hypnotic session too long, if the case appears to be one requiring profound hypnosis. All experimenting that goes beyond the immediate medical purpose of the hypnosis increases the danger of an hysteriform liberation of the hypnotized from the hypnotizer. Many persons fall into a condition, even in the first hypnotic procedures, which urges them to release themselves from the hypnotizer. They hallucinate without having been required to make the corresponding hallucination by the hypnotizer, pay but little attention to the hypnotizer's words, etc. When the patient acts thus, the hypnotizer should regain control by shouting at him loudly, and if this does not meet with success, he should wake the patient at once. The later hypnoses, which should if possible take place on the same day, should be made very short and usually the operator is successful in his effort to have the patient yield amicably to the requirements of the hypnotizer in hypnosis. Due attention paid to

this condition will prevent the occurrence of hysterical disturbances, which are not in themselves a danger to the success of a treatment, but which may cause embarrassment to the physician in his office hours. The mildest form of releasing is of course found in the patient's simply breaking off his *rapport* with the hypnotizer during the hypnosis and sleeping on, without paying any attention to the hypnotizer's efforts to wake him. Even such occurrences will not take place if the hypnotizer makes sure that he is in contact with the patient, and interrupts the hypnosis at once when the restoration of the contact appears impossible. Even after sleep has begun an active shaking will frequently wake up the patient. Of course, in a hospital, it is quite possible to permit the patient to sleep on without disturbance; no harmful effects for the patient and for the treatment could be expected from such sleep. But in the consultation hours, and in treatment by a visiting physician, everything must be done to prevent the occurrence of such states of sleep. As we have mentioned, it is a mistake to believe that the depth of the hypnosis alone assures the therapeutic success and a retention of the suggestion. A cautious formulation of the suggestion should not be neglected because we are dealing with profoundly hypnotized patients. Statements made by the profoundly hypnotized person are by no means always trustworthy, whether we are dealing with the illumination of an amnesia pure and simple, or with a cathartic hypnosis. The correctness of such statements is shown not by the hypnosis alone but by the entire condition of affairs. In waking from profound hypnoses, particular caution is necessary, even when applying the most considerate rules of caution (a slow preparation for awaking, suggestions to oppose headaches and other after effects), such unpleasant consequences as dizziness, staggering, absentmindedness, are not unusual. Effort may be made to eliminate these by a suggestive stroking of the brow. Sometimes also a short after-hypnosis, which is aimed exclusively against the post-hypnotic discomforts, is of advantage. Furthermore, it may be said, in general, that after effects are customarily stronger when much experimentation was attempted in hypnosis and the hypnosis was of long duration. This is another serious reason for our admonition not to permit the first profound hypnoses to last too long. It is a mistake in practice to leave unobserved even an apparently sleeping, profoundly hypnotized person. Somnambulous acts may succeed upon the apparently calm sleep of the hypnotized person. After breaking off the profound sleep, it is desirable not to dismiss the patient at once from observa-

tion, but to keep him in the vicinity of the physician for some time. Dizziness, fainting, may in some cases result unexpectedly. On the whole, we must bear in mind the fact that a profound hypnosis is not an indifferent interference, for profound hypnosis addresses itself to deep lying strata of the human soul, which, once they are unfettered, are not always easily subdued.

Several inferences applicable to experimental hypnosis result directly from the above statement. Experimental hypnosis of course promises rich results only when dealing with profoundly hypnotized persons. Profound hypnosis must therefore be attempted with every conceivable technical means. Persons with whom one is not acquainted will probably not be available for such experiments. It is a self-evident requirement that the person with whom one intends to attempt a profound hypnosis should be instructed as to the fact that the interference projected is not an entirely indifferent one. Only a serious scientific interest, a suitable preliminary training, and a particular aptitude for productive scientific investigation can justify the practice of experimental hypnosis, although it appears questionable, from a legal standpoint, whether experimental hypnosis is admissible at all, even with the consent of the person to be hypnotized. A sufficient legal justification of hypnosis is found, in the last analysis, only in the therapeutic end pursued by the hypnosis.

But before we consider in more detail the dangers of hypnosis, let us consider the most effective means at our disposal for the production of profound hypnosis in persons otherwise refractory, namely, hypnosis with the use of soporifics. This procedure has been repeatedly used as such by the hypnotizers of the old school. Of late, Kauffman and Hallawer have applied it rather often.

At times hypnosis in the same individual may be more profound if carried out at the normal period for his afternoon or evening slumber. Elsewhere we have again and again emphasized the relation between hypnosis and sleep, pointing out the fact that sound sleepers are as a rule more easy to hypnotize. With sound sleepers, one may also use the method of approaching their beds while they sleep and talking to them softly. Very frequently it is possible to enter into contact with the sleeper while his sleep is in progress. This *rapport* is completely identical with the *rapport* with the hypnotized, and these experiences suggest that even artificially induced sleep may be conducted over into hypnosis. Earlier hypnotizers used to make use of chloroform for this purpose, and Hallawer still uses this drug. Hallawer usually does not tell his patients (they are women, he is a

gynecologist) that he intends to hypnotize them. On the contrary, he promises them narcotics and thus frequently obtains hypnosis by merely putting the mask in place, or by more or less extensive use of chloroform. He considers it to be a special advantage of his procedure that his patients do not know that suggestion and hypnosis are involved, but believe that they have been drugged. We do not consider it an advantage to have the patient kept in ignorance of what is happening to him. Modern psychotherapy attempts, and rightly so, to avoid prevarication toward patients, and thus it has brought about a more dignified relation between the psychotherapeutist and his subject. There may be cases and situations in which it is not possible to apply the principle of the honesty of the psychotherapeutist, but the principle as such should not be sacrificed. Of course, it is not the most essential component of Hallawer's procedure of hypnonarcosis to keep the patient ignorant of the fact that he is to be hypnotized, and the procedure as such is doubtless valuable, though the question must be raised whether chloroform—which is a very strong drug, frequently producing severe injuries in cases of extreme susceptibility to chloroform, injuries that may even include sudden death, though the dose be small—should not be replaced by some other drug. We should similarly hesitate to recommend the use of scopolamine, which Kausch administers, in the case of strong men, in doses of 0.0015 grm., adding 0.01 grm. of morphine. Now, the maximum dose of scopolamine is 0.005 grms., and we consider it very dangerous to exceed maximum doses for purposes of hypnosis by means of soporifics, for general reasons. We also reject the use of morphine for artificial sleep hypnoses, as the danger of making a morphine addict out of any individual, however slight this danger may be, should not be incurred without very good cause. It appears most expedient, therefore, to give veronal or one of the veronal derivatives, as does Kauffmann. In view of the slow operation of veronal, as well as of soporifics of its class, it is necessary to administer the drug about two hours before it is intended to perform the hypnosis. During these two hours the patient must be instructed to prevent himself from falling asleep. The hypnosis is then most expediently begun by means of the sleep suggestion, and the patient is then left alone. Kauffmann tells his audiences: "You cannot believe how easy an hypnosis often is after you have given a little veronal." We can confirm this statement fully. In general, we prefer medinal, of which we give 0.5–1 grm., going as high as 1½ grms. in exceptional cases.

For certain purposes it may be inexpedient to make use of the veronal group, owing to the tardy results of its operation. Now, paraldehyde is a soporific which is absolutely harmless, even when taken in large doses, and has a very prompt effect. Its only disadvantage is its bad taste. We use paraldehyde always when we wish to produce hypnosis quickly, for the patient is already mature for hypnosis five or ten minutes after taking the drug. Sometimes it is necessary to experiment a bit in dosage. Furthermore, in paraldehyde hypnosis there is greater danger that the patient may swiftly attain a depth of slumber in which it is impossible to produce a *rapport,* or that the paraldehyde will produce a condition of dream-like confusion, which would destroy the possibility of receiving suggestions. We make use of paraldehyde in doses of between 4 and 12 grms., doses over 8 grms. being being exceptional. As a rule, we have found it desirable to permit the patient to continue sleeping after hypnosis. If smaller doses are given, let us say 4 grms., as Hoff has given them in our ambulatorium, the patients may be sent home with an escort, after waking them from hypnosis. They are a little unsteady on their pins, but will get home safely and will sleep off the effects of the soporific at home.

Hoff, in the quantity production of an ambulatorium, where ten or fifteen persons had to be hypnotized, found it advantageous to give in advance to each of the patients to be hypnotized 4 grms. paraldehyde. The hypnoses may then be attained more easily and with less waste of time, although, as we have already stated, we avoid in principle any neglect to inform the patient that he is taking a soporific to aid us in bringing about hypnosis, there may in some cases be need of such neglect for external reasons. We should like in this connection to communicate an interesting experience, such as may often be had as a result of hypnosis by means of soporifics. A patient is hypnotized after a pathological alcoholic intoxication for the purpose of illuminating the existing amnesia. Hypnosis succeeds in digging out none of the amnesic material. The patient is thereupon given 0.75 grm. medinal, without being told that it is a soporific, and is again put under hypnosis three hours later. It is observed, before the hypnosis, that the patient is very vivacious, presenting no evidence of fatigue, desire for sleep, etc., although he had never before taken soporifics.[1] In the subsequent hypnosis the patient at once falls into

[1] In one patient on whom hypnosis was attempted after giving 10 grs. of veronal, a peculiar effect was noticed in that she became very wakeful

a profound slumber, and a perfect illumination of the amnesia is attained. Before waking up, the patient receives the customary suggestion that he will feel perfectly sound and cheerful, and will not be sleepy. After his punctual awakening from the hypnosis, this patient is extremely sleep-intoxicated, and staggers, in spite of the suggestion given him, and on being gotten to bed, enters at once into profound sleep. This experience strikingly confirms our remarks concerning the mutual relations and the interchangeability of psychological and pharmacological influences on the sleeping apparatus. The mechanism in this case is the following: On the one hand, the pharmacological effect of the soporific breaks forth almost eruptively, as it were, and only because it is conditioned by the psychological influence of the hypnosis, while on the other hand the pharmacological effect survives the effect of the psychological suggestion made before awakening, and can no longer be suppressed by the latter. The question might be asked whether hypnoses by means of soporifics are not simple cases of sleep and whether we are really dealing with hypnoses at all in such cases. Anyone who has ever undertaken hypnoses by soporifics will reject this objection at once, for the patients carry out suggestions and demean themselves in every way after the manner of the profoundly hypnotized. It may not even be said that the turgidity of the consciousness is a more profound one than in other hypnoses, but of course this depends on the quantity of the drug that is used.

Of course, soporific hypnoses may also be produced by means of other sleep drugs. We have not made any experiments with them. Of course, the first demand must be that the drug used be absolutely harmless, for it must never be forgotten that hypnosis itself is only a technical device for the treatment of neuroses, and has absolutely no therapeutic value as such. Even a glass of wine or cordial or a little bromide will be just as useful in some cases. Once a soporific hypnosis has been obtained, it is often found, as we may state in support of Kauffmann, that it is no longer necessary to administer soporifics again for each new hypnosis. The attainment of a single profound hypnosis in these cases also facilitates all the later hypnoses.

It may also be asked whether that which was attained by means of soporific hypnoses could not also have been attained without

and excited over her condition and hypnosis seemed impossible. Inquiry disclosed a similar excitability when the patient had taken soporifics on previous occasions.—Trans.

soporifics. It is not possible to give a short answer to this question. We have taken as our point of departure the presupposition that the condition of hypnosis is a condition which may follow with the necessity of natural law from sleep itself. As a matter of principle any human being may be placed in profound hypnosis. But the conditions of bringing about profound hypnosis may not always be realizable in every individual without further ado. We very frequently find that persons who have been quite hypnotizable for some time suddenly become refractory to hypnotic attempts. When, therefore, a person turns out to be not hypnotizable, it is to be conjectured that under special circumstances, provided the hypnotizer put forth special effort, or under favorable conditions, he might yet be hypnotizable without the use of soporifics. For we also find that persons that have repeatedly shown themselves refractory suddenly turn out to be excellently hypnotizable without our being able to assign a precise reason for this change. We have also pointed out that the time of day may be of some effect in this connection. But fatigue, weakening due to diseases of the body, also play an important part in the conditions for susceptibility to hypnosis. Accidental intoxications may also be of importance. Thus, the morphine addict during his phase of abstinence is usually exceptionally susceptible to hypnosis. In the case of a dipsomaniac, whom we first tried to hypnotize during a lucid interval, the hypnosis at first was not effective, but a particularly profound hypnosis was attained when he was hypnotized out of a dipsomaniac attack on the next occasion, immediately after being brought to the clinic. But this is again coming back to the question of hypnosis by soporifics. The soporific creates favorable circumstances for bringing about a condition which may in principle be produced in other ways also, but which cannot always be technically realized without further device. To recapitulate, a hypnosis by means of soporifics enables the susceptibility to profound hypnosis, which is present in all mankind, to be more easily brought out.

Nor should we be unclear as to the fact that there are cases which are refractory even when treated with hypnosis by means of soporifics. Even in the matter of testing what constitutes an effective dose, we are limited by the fact that we cannot make too many experiments on the same patient. It is quite conceivable that by making use of an improved technique, perhaps by adding the use of ether, the number of refractory cases might be very practically reduced.

Injuries due to hypnosis are particularly to be feared in profound hypnoses. We have discussed most of the phases of this matter in

the paragraph on the technique of profound hypnosis. The after effects of hypnosis are either in the domain of the physical, dizziness, headaches, etc., or there may also be psychic symptoms of every type, from the general domain of psychogenetic pathology. Exacerbations, or aggravations of hysterical symptoms, are quite possible. Hysterical peculiarities may arise out of hypnosis, etc. J. H. Schultz has collected all that is known concerning injuries due to hypnosis. All these phenomena of course appear most easily in the case of hypnoses serving the purposes of curiosity, or the popular amusement, and in which the suggestibility of the hypnotized is abused in order to carry on a more or less stupid horseplay at his expense. In the case of hypnosis serving therapeutic purposes, such incidents may be present only as a reaction favoring the ultimate therapeutic end. The physician should not permit himself to be nonplused by subsidiary phenomena of any kind in the course of such a treatment. Furthermore, injuries due to hypnosis, such as may result from popular exhibitions of hypnosis, etc., may usually be cured by appropriate treatment. A danger of hypnosis is in the fact that it may be used as a technical device for producing a state of subordination. This danger should not of course be exaggerated, since the hypnotized always retains a will of his own. A transfer from hypnosis to subordination presupposes of course, in general, bad faith on the part of the hypnotizer. To be sure, the attachment of the hypnotized to the hypnotizer may become too pronounced even without bad faith on the part of the latter. This is a danger which the psychotherapeutist must recognize and combat in advance. We shall have more to say on this subject in general in our therapeutic section. But of course hypnosis shares this danger with all the other forms of psychic treatment, whether we are dealing with an unconscious or with a clearly conscious psychic influence, for the results of psychoanalysis have shown us beyond doubt that the healing effects are brought about by the path of transference, *i.e.*, the reappearance of former psychic-love adjustments and their attachment to the physician. In any psychic treatment, in fact, in any medical treatment, we are in danger of attaching the patient to us too strongly, of making him lose his independence. It is difficult to say whether this danger is more pronounced in the case of hypnotic treatment. At any rate, the danger is quite avoidable, and where too strong an attachment to the physician remains after a hypnotic treatment deficient technique is to blame. Where hypnotic treatment is carried out in a technically correct manner there is

hardly any possibility of thinking of deleterious effects from the hypnosis.

In the preceding treatment we have discussed essentially the technique of hypnosis, in the form in which we usually apply it. Of course, we may substitute for the hypnotic method proper the waking suggestion, in which the patient is given in advance only the precisely formulated suggestion, and may be left lying with his eyes open or shut. As a preliminary to the suggestion the technique elaborated by Coué and Baudouin may also be of value. This technique was intended by these two authors to make clear to the patient the power of thoughts and ideas over the body.

First experiment: The person experimented on, who is standing, is instructed to hold himself perfectly rigid, so that when taken out of equilibrium by a push or thrust he will fall down, swinging on his heel as a fulcrum. After this preliminary experiment, the subject is instructed to concentrate intensively on the idea that he will fall backward. Most of the persons experimented on actually do fall backward after a short time. This method may be further supported by having the hypnotizer step behind the patient and exert a slight pressure against his forehead. This experiment yields positive results with the great majority of persons. It is somewhat more difficult to secure a falling forward by means of this technique, obviously owing to the fact that the statics of the human body permit a falling backward more easily than a falling forward.

Second experiment: The person experimented on, who is standing, is instructed to clasp his hands firmly. He is then instructed to concentrate on the thought, while keeping his eyes either shut or open, that it is impossible for him to unlace his fingers. Most persons actually cannot separate their hands. Of course, other psychological factors enter into this experiment besides the factor of suggestion. When our hands are clasped we have only an imperfect notion of the situation of the individual fingers and are consequently not capable, at a moment's notice, to hit upon the proper innervation.

Third experiment: A heavy object, such as a ring, is attached to a thread, causing the latter to depend tautly (Chevroeuil's pendulum). The subject is now instructed to concentrate intensively on a circle. Very soon the pendulum will begin a corresponding oscillatory motion, of which the subject becomes aware with astonishment on opening his eyes. If the subject has been instructed to think of oval or straight lines, etc., the motion will be changed accordingly.

The advantage of these tests is in their succeeding almost univer-

sally with all persons. By means of these tests even otherwise refractory persons will be brought to admit the effect of the mind on the body. The experiments may be used both as preparation for waking suggestions and as an introduction to hypnoses in the sense described above.

It seems desirable to make a few general remarks concerning the attitude of the hypnotizer during hypnosis. The popular view is to the effect that the hypnotizer must carry out the hypnosis by putting forth unusual effort and energy. This view is of course wrong. His inner interest or indifference has nothing to do with the success of the hypnosis. What the hypnotizer needs is a calm firmness; he must not permit himself to be dismayed by deviations from the expected course of the hypnosis. Specific personal qualities are not required on the part of the hypnotizer.[1] Hypnotizing is a technique that can be learned by anyone. We prefer to have the hypnotizer assume the part of the physician and do not emphasize the magic formulas. It may be that under certain circumstances the latter will be of value in producing profound hypnosis. To what extent the hypnotizer will emphasize the magic character of his acts is more or less a matter of personal taste. But the magical gesture is no doubt unnecessary for the attainment of therapeutic successes.

[1] In this country hypnosis has been largely discarded in recent years and the laity has come to look upon its use for therapeutic purposes with disdain and skepticism. The profession, too, has neglected to continue its normal interest in this subject as compared with that of the European profession, though the magic character of occasional cures affected by hypnosis leads to amazement in place of understanding of the true value of the method.—Trans.

XII

General Outlines of Hypnotic Therapeutics

In the foregoing treatment we have expressed the view that all persons are accessible, in principle, to profound hypnosis. But we do not go so far as to say that all persons may be put into profound hypnosis under the conditions of ordinary medical office hours. According to Liébault, about 16 per cent enter into profound sleep; according to Ringier, about 35 per cent. Hilger has given similar figures. Trömner even obtained in one series 52 per cent of profound hypnoses. We cannot ourselves indicate percentages, since, in a great number of cases, as we shall explain later, we do not aim in advance at profound sleep, and give indication even in the formulation of our introductory words of this fact. In general, in our experience, the percentages given as profound sleep hypnoses are probably too high. Furthermore, these statistics really constitute a motley array of the most heterogeneous material, with the result that their value is quite relative. Besides, according to our experience, the depth of sleep depends in great measure on the time of life. According to Trömner, whose exposition we are here following, children are very easily brought into profound slumber, middle-aged persons present some difficulty in hypnotizing them, old persons as a rule are very hard to influence. According to the experiences of the present authors, which are in perfect agreement, the number of patients who are absolutely refractory is very slight, perhaps between 2 and 6 per cent. Here again figures depend to a great extent on the nature of the material, and for this reason have no absolute value. In the case of children under five years old, it is not an easy matter to decide on hypnotic treatment, as a rule, as it is difficult to determine a suitable suggestion formula. Also, it is questionable whether there is any sense in carrying out a hypnotic procedure at a period in which even the waking life presents similar cleavages of instinct as are found in hypnosis. We admit, however, that to our knowledge there is a lack of sufficient observations concerning hypnoses in early childhood.

Hypnosis may be applied therapeutically in many ways. We shall distinguish for the present between three such applications:

1. The hypnotically induced sleep is used directly as a healing factor.

2. The suggestion given in hypnosis is directed outright against the psychic or physical symptom which is to be eliminated.

3. Forgotten experiences are brought back to memory in hypnosis and are made accessible to the consciousness (cathartic hypnosis).

Notes on 1. Wetterstrand calls our attention to the fact that patients who are run down physically may be excellently calmed by means of long hypnoses extending even for days at a time. He recommends this procedure also for neuroses. We also are convinced of the direct healing effect of sleep and for this reason extend profound sleep hypnoses for several hours, if the physical circumstances permit, and if we are convinced that there is no danger of the patient's passing into the exceptional state of somnambulism. But even after light hypnoses it is expedient in many cases to permit the patients to sleep on for some time (a few minutes, at most a quarter of an hour) their hypnotic slumber, after the hypnotic procedure proper, under the suggestion that they should sleep on peacefully, " switch off " all thought, concentrate on themselves, etc. We thus attain a natural transition, a gradual passing from the hypnotic state to the state of waking, and avoid too sudden an awakening. We have observed only the most favorable effects from this after-sleep after the hypnotic procedure proper, in many cases even a strengthening of the suggestions communicated in hypnosis by means of the susbequent sleep. Only in a few cases have we been able, as is recommended by Wetterstrand, to permit the patients to sleep for more extended periods and wake them only for their meals, etc. This hypnotic sleep cure has been of excellent effect in our practice, among other things, in the treatment of an abdominal neurosis. The patient in question, a woman, came to the clinic completely run down, and very much emaciated, suffering from vomiting, psychogenically motivated, which ensued upon taking either solid or liquid food. The hypnotic sleep cure in this case registered striking results within a few days, soon rising to a normal consumption of food without vomiting. At times this sleep cure may be ably supported by administering small doses of soporifics. By means of a combination of long-time hypnoses and soporifics, the patients may often be kept for days in a condition of sleep, which has afforded us excellent

results particularly in the treatment of stubborn tics,[1] even when of organic origin and motor stimulus phenomena in general (compare also long-time narcotic sleep in schizophrenia as practiced by Kläsi). Such sleep cures will in general be applicable only where it is possible to secure suitable supervision. Even in hypnosis by soporifics, the immediate sleep effect will also be of value. We believe that, in addition to the physical effect of the sleep, the psychic elaboration which the person devotes during sleep, to his experiences, also has value. It is self-evident that only very profound degrees of hypnosis are valuable for the utilization of the sleep effect as such.

Notes on 2. The direct suggestion may be made and become effective in superficial sleep as well as in profound sleep. It may be addressed against the symptom as such and may in these cases be given in great detail. For instance, if we are combating insomnia, it will not be sufficient for us to say to the patient: "You will sleep well," but, depending on his habits of life we must say: "You will get tired and sleep at this hour or that; you will go to bed; you will feel a heaviness in all your limbs; you will feel sleepy; your eyes will close; you will fall into a profound, sound sleep; you will sleep throughout the night without any disturbing dreams and you will wake up refreshed in the morning at this hour or that." Sometimes it is even expedient to add that the patient, after satisfying a bodily want, will go on sleeping peacefully.

If the suggestion is intended to combat attacks of hysteria, it will be useful to have the patient describe precisely his feelings before the beginning of the hysterical attack and then to give him the suggestion that these sensations do not ensue even when excitement is present and that for this reason the hysterical attack will not take place. These suggestions must be given with the utmost detail, and be based on a meticulous observation of the patient's condition of life.

If it is desired to influence organic symptoms, or symptoms of uncertain psychogenesis, the path of direct suggestion described above is the only one available. But if we are dealing with symptoms of known psychogenesis or of reasonably certain psychogenesis, it is desirable not to attack the symptom by means of direct suggestion, but if possible to aim the suggestion against the psychic factors which are responsible for the appearance of the symptom. We shall there-

[1] In a number of my tic cases the results with hypnotic suggestion together with the use of relaxation exercises have been very gratifying and is surely the best method of treatment available for these cases.—Trans.

fore prefer, in general, to suggest to a female patient, who has attacks of hysteria every time she sees a certain person, not only that she is to remain calm on such occasions, but we shall be at pains to learn whence this person has obtained his or her symptom-producing effect, we shall investigate the reminiscences which may perhaps crop up at each new appearance of this person and attempt to deprive them of their power. We recently treated a young man who always failed at examinations owing to a feeling of acute fear and terror. It turned out that whenever he was present at an examination, he experienced a revival of his fear of his oversevere father. The suggestion was therefore aimed not only against his fear of examinations, but also against his attitude of terror toward his father. It is therefore our effort always to get down to the psychic causes and to combat these psychic causes by means of suggestion. But it is evident at once that such a treatment absolutely requires an intimate association with the patient. We are of the view that such intimate association with the patient will be more fruitful if the physician has a knowledge of psychoanalysis and is capable of applying the psychoanalytic technique in the conversations preceding the hypnosis. We shall have a little more to say on this subject later.[1]

Notes on 3. The foundation of cathartic hypnosis is the assumption that the neurotic symptom is based on inhibited obstructed affects. Hypnosis abolishes inhibitions and obstructions and liberates the obstructed affect (Breuer). We have already discussed this as a principle. We have also pointed out that hypnosis only opens up a path to the experiences of the system of the preconscious mind, but not to the experiences of the system of the unconscious. But the latter is the chief source of neurotic symptoms, and at once our attention is called to the fact that cathartic hypnosis has frequently turned out to be insufficient. The catharsis enables us to eliminate traumatic material of superficial location, which may under certain circumstances result in healing, but are often powerless when faced with more basic, more profoundly displaced material. As a matter of fact, our own results obtained by means of cathartic hyp-

[1] Analysis of a case of hysterical blindness revealed that when going under anesthesia for the removal of an affected eye with glaucoma, the patient thought of her mother dead 20 years, who also became blind from a shock which she had received on hearing of patient's elopement with the man her mother bitterly opposed her marrying. The patient feared dying and displaced her remorse in having caused her mother's affliction by herself becoming blind.—Trans.

nosis have not been very satisfactory. But we must state that other authors, for instance Kohnstamm and Friedermann, Frank and Bezzola, have obtained much more favorable results and that cathartic hypnosis must after all be considered as a serious therapeutic method. Very frequently, however, as we have already stated, the patient will not give any different indications in hypnosis than in the waking state, or he will state only things that he himself has already known but withheld, and finally, the material that had really been forgotten and was dug out by means of hypnosis has often been of comparatively slight importance. Only neuroses are of course involved in treatment by means of cathartic hypnosis; organic disturbances are completely inaccessible to this treatment. In general, catharsis requires profound hypnosis. But Freud has stated that patients inaccessible to profound hypnosis may obtain associations as a result of slight suggestive measures. These reminiscences attained by means of suggestive influence lead directly to the later method of psychoanalysis, the method of free association. Let us emphasize that the method of free association is doubtless by far the more penetrating and fruitful of results. Frank also makes use of superficial hypnosis for bringing on catharsis. We append a few remarks on the technique of cathartic hypnosis which may be applied also in the illumination of amnesias, where such illumination appears desirable for any reason. We must assume that the illumination will not require more than a single session or several sessions, but will rather be attained piecemeal with great effort. In this connection, we refer to the observation of Nef who illuminated a great amnesic gap piecemeal. In the illumination of amnesic lacunae we must choose some point of departure, as in the case of penetration to the causes of a neurotic symptom. In the case of amnesic lacunae we may either proceed from the last recalled situation or from the first recollection after the return of the normal state. From this point of departure we must feel our way forward step by step, always bearing in mind that this statement or that may be incorrect. It is therefore expedient to begin all over again from the indicated points of departure at times.

In the cathartic treatment of neuroses, the symptom is the natural point of departure. The earliest observations of Breuer and Freud already showed that it is not sufficient to disclose any random psychic cause for a symptom, but that all the occasions must be revealed under which the symptom has put in its appearance. In most cases, the course of reamnesation will consist in a progress of the investi-

gation from the latest occasions back into the past, even into childhood. Here again we must constantly ask whether the memories communicated by the patient are memories or imaginings. Very often it is hard to draw the line. Nor is it of much consequence for the therapeutic effect; since cathartic hypnosis is concerned not so much with the determination of historical truth and since significant psychic realities may be concealed behind the figments of the imagination; and even the veiled reference made in the imaginings may be of therapeutic consequence for the patient. The principle applying to all cathartic treatments of neuroses must be to uncover as many as possible, even all,[1] of the psychic causes of a symptom before the symptom will finally disappear. We have no right to expect, therefore, that a symptom will disappear if only this occasion or that has been uncovered.

On the basis of all the foregoing treatment, we consider the method of direct therapeutic suggestion to be the most important. It is not only applicable to the widest extent, but is on the whole the most effective. We are accustomed to apply this procedure as the norm. In purely organic symptoms, the mode of treatment is extremely simple. The hypnosis is made as profound as possible, and once the desired profundity has been attained, the therapeutic suggestion attacking the symptom is formulated with the utmost incisiveness and clarity. The treatment must often be repeated. If we are treating a neurosis, we usually devote a few (two or three) hours to a psychoanalytically planned conversation with the patient. Only then do we begin our hypnotic seances, always preceded, however, by questioning. Material obtained by these questions is used in the formulation of the suggestion. In the succeeding sessions also we devote much of the time at our disposal to such questions and make sure to formulate the question to fit the individual case closely. In neuroses, we usually attach no particular importance to a deepening of the hypnosis, and concentrate our energy on the psychic illumination of the patient. In general, the first signs of improvement in cases that react therapeutically appear quite early, approximately after the third or fourth hypnotic session. As a rule, improvement then proceeds rapidly. The elimination of the symptoms does not mean that treatment should be stopped at once. Relapses after the first liberation from symptoms are frequent; in fact, we must be prepared for the first relapse and not consider the

[1]Strictly speaking, the uncovering of all causes is an impossible task.

case cured until the first relapse has been overcome. It is obvious that such treatments by hypnosis cannot be completed in a short time. We count, on an average, on from 15 to 25 sessions of one hour where the neurosis is at all serious. We shall have occasion later to remark that hypnosis is not sufficient in very serious neuroses. Here psychoanalysis must be called upon. We shall say more in our more detailed section, on when the hypnotic treatment is indicated. Particular stress must be laid in every hypnotic treatment on urging the patient not to give up his symptoms to please the physician, but to overcome his symptoms in his own interest. We must force the patient to gain a more or less complete grasp of the meaning of his symptoms and to learn to dispense with them. In fact, in general, in using the method of direct suggestion we must give heed, beginning with a certain phase of the treatment, to informing the patient that he must make the symptoms disappear on the basis of his own adjustment, and securing his coöperation in this direction. Of course, it will not be well to overemphasize the patient's independence in the earlier phase of the treatment, but the reference to the patient's own will must be emphasized in the later formulation. Never will there be any cases of such conditions of abject subordination of the hypnotized on the hypnotizer, of that subjection of the hypnotized toward his physician, which were so often attempted by the old-style hypnotizers and which are rightly feared as abuses of hypnosis. One of the present authors, at the beginning of his medical career, found a number of instances of such hypnotic bondage as a remnant of the earlier period. Certainly such phenomena are not of the essence of hypnosis, and a correct technique can easily obviate such products of the art. In fact, we may go so far as to say that it would require special effort in this perverse direction to secure such conditions. It should not be the ambition of the hypnotizer and psychotherapeutist to attach the patient to himself as powerfully as possible. Any psychotherapeutic attachment of the patient to the physician must in the last analysis have the purpose of enabling the patient to have his own individual experience and to free him from those obstructions that impede the development of his personality. Any psychotherapeutic connection must therefore be broken and one of the important phases of all psychic therapy is a correct breaking of this contact. We owe our understanding of the nature of these processes to Freud's theory of transference, which we seriously recommend to the reader.

We have again and again emphasized that hypnosis is a regressive

condition, a return to an undifferentiated and formless being. We might ask what sense there is in obtaining such a giving up of differentiations. We should not ignore the important meaning of chaos, or of the primitive, for it is from these sources that all new formulations emanate. Here in this sphere of Freud's system of the unconscious lie the sources of the creative. The physician's hypnosis melts down perverse differentiations and forces the individual to reconstruct a psychic life of higher accommodation and with a better understanding of reality. This reconstruction is conducted under the supervision of the physician's personality, for the relation of the *rapport* is an essential ingredient of hypnosis. Herein, and in the relatively slight depth of the return to the unformulated, in the reservations of the hypnotized, is found that peculiar weakness of the hypnotized person, which places him so far below the really creative person and the really loving person.

This is the proper point for devoting a few more words to the theory of Coué and Baudouin. Both these men are guilty of a fundamental psychological error in failing to recognize the rôle of the fellow human in suggestion and hypnosis. Baudouin is also mistaken when he assigns to the decision of the will of the individual a fundamentally obstructing influence. He is wrong in advocating the view that a decision of the will strengthens the neurotic symptom. Even decisions of the will are based on forces emanating from the realm of the unconscious and awaken such powers in the individual. The decision of the will may have disturbing influence if it is not properly supported by the material of the unconscious. But we have no reason to dispense with this powerful support to decisions of the will. And particularly in the second phase of the treatment, we appeal without hesitation even to the rational personality of the patient, both in the superficially and in the profoundly hypnotized. In other words, we by no means scorn, in certain phases of the treatment, to unite our mode of influence with a dialectic process, in superficial as well as in profound hypnosis, a process approximately resembling the Dubois persuasion method.

XIII

Special Hypnotic Therapy

It is obvious from the above that we do not consider it proper to aim chiefly at a deepening of the hypnosis in every case, and it is very important to decide whether a treatment requires superficial or profound hypnosis, for the reason that the patient's mind must be duly prepared at the outset. We shall therefore now take up the question of what states require profound hypnosis and what states require only superficial hypnosis. The following general rule may be stated: Profound hypnosis is as a rule necessary: (1) in the illumination of amnesias;[1] (2) in influencing organic symptoms; (3) in strengthening the desire to break a habit, in addicts.

As a matter of principle, profound hypnosis is not necessary in neurotic disturbances, although it may be desirable in individual cases.

Let us now investigate specific problems.

A. Treatment of Organic Diseases

Every case of illness depends in large measure in its phenomenology and in its aspect, as has been repeatedly stated by one of the present authors on the central attitude of the personality. It is by no means correct in every case to speak of psychogenic additions. Even aside from the question of whether psychotherapy can or can not affect the fundamental trouble, it will be in a position to attain important results by influencing the individual attitude. This is true, for instance, of the troubles of cardiac patients and of the terrified expectations that such patients have of their disease, which sometimes, under the aspect of anxiety neurosis completely dominate the external picture of the disease. In many cases simply admonition, persuasion, or the like will be sufficient to influence the patient's attitude favorably. Frequently, however, hypnosis will be necessary, which must be used with due tact and caution. Particularly in such cases it will as a rule be wrong to undertake extensive psychoanalysis. The diseases to which such treatments may be applied—and they

[1] To be sure, Frank rejects profound hypnosis in his cathartic hypnotic treatments and operates with hypnoses of medium profundity.

must be effective after three or four sessions—are diseases of the joints and bones, carcinosis, etc. Of the diseases of the nervous system, particular attention is deserved by multiple sclerosis, whose symptoms are so emphatically shot through with psychogenic factors. We have already emphasized the fact that the patient's attitude is of importance in any organic disease, which by no means gives us the right to speak at once of hysteria, or similar conditions, merely because the will may not be strong enough to compensate organic disturbances. Even the will to compensate organic disturbances of equilibrium may be considerably improved by psychotherapy. The striking successes so often observed at the beginning of treatment of *tabes dorsalis* by exercise may perhaps be best explained in this way. The patient will occasionally too early relinquish the struggle against a symptom that would be quite easily compensated with proper guidance and with a proper attitude on his part. In certain domains of apparently organic diseases it is difficult to draw the line between the organic and the functional. This is particularly true of diseases of the intestines. We have pointed out in detail above how strong is the influence of the psychic element on motility and on secretion of the gastric juices. Even unquestionably organic alterations in the domain of the abdominal tract, such as dilatation and ptosis of the stomach do not put in their appearance until psychic factors are added. The violent vomiting[1] of such patients, their hardly bearable pains, often disappear with striking swiftness in hypnotic treatment, which must be adapted to the principles of the treatment of neuroses. Cases of *hyperemesis gravidarum,* even such as include in their origin toxic factors in addition to the psychic, are favorable subjects of hypnotic therapy. Certain forms of constipation, as has been pointed out by Forel, and as we may confirm, are very frequently susceptible to favorable treatment by psychic means. Nor will profound hypnosis always be necessary in these cases. Many of the cases of abdominal and intestinal neuroses, with more or less pronounced organic symptoms, must of course be classed as neuroses, and these require the entire armamentarium of neurotic therapy, *i.e.,* the more serious cases will not yield except to psychoanalysis. But excellent results may be obtained, even in acute cases, by hypnosis alone. Thus we succeeded in obtaining immediate

[1] One case of mine with chronic vomiting and inability to retain food for a period of five months was quickly helped with hypnotic suggestion gotten from psychoanalytic study of the causes of this condition.—Trans.

results by means of two seances in a case of singultus[1] with sarcomatosis of the peritoneum, which had ensued upon an ether narcosis administered for the purpose of precise investigation and had resisted all other treatment. In the gynecological field, leucorrhea, menstrual troubles, hyperemesis gravidarum, have been repeatedly treated with success by Forel, Hallauer, Lieptmann, Meyer. We shall say a few words later on treatment of vaginal anesthesia. In the treatment of such disturbances, we shall probably need to ask always what phases of these disturbances may be regarded as organic neurosis, in other words, as a neurosis localized to a specific organ, and what phases must be considered as distinctly organic disturbances. If the organic neurotic phase predominates, the general principles of neurotic treatment must be applied, of which we shall speak later in the proper connection. Bunnemann reports on the influence of hysteria on skin diseases.[2]

Bronchial asthma may in some cases be influenced by hypnosis, yet this influence is apparently not easy to attain; we have had no successes in this field.

Even disturbances of the vegetative nervous system, not recognizable as psychogenic, such as, for example, hyperhydrosis, are sometimes influenced by profound hypnosis.

Kohnstamm and Friedermann report a cure of exophthalmic goiter by means of hypnoses. But the normal treatment for Basedow's disease of course does not require hypnosis.

All the possible phases of psychic treatment are treated in detail in the material collected in O. Schwartz's *Psychogenese und Psychotherapie von Organsymptomen*. We refer the reader to this work, but must point out that the contributors of the various articles have far too low an estimate of the method of treating by regular psychoanalysis. We consider this method to be a royal remedy in the treatment of serious neurotic troubles, regardless of whether they result in organic symptoms or not. Hypnosis is only the method for easy and medium cases and may have great symptomatic value even in the treatment of serious cases.

[1] In several cases of singultus, of epidemic origin, hypnosis was very effectual.—Trans.

[2] In one case of angioneurotic edema and urticaria, hypnosis was tried but without success, though it is possible that the psychic approach in the suggestion was faulty.—Trans.

B. Hypnotic Influencing of Pain and Hypnonarcosis

A special place in the field of hypnotic therapy is occupied by the application of hypnosis for the elimination of pain. There is no doubt that psychogenic pains may be influenced by hypnosis. But even a slight acquaintance with the problem of pain makes it apparent that the general attitude of the individual is of very great importance in his observation and estimate of the pain. The pain must pass through a number of psychic stages before it appears in its final form. The final forms are without doubt very susceptible to hypnosis. Of course, hypnosis will also alter the distribution of the blood to the regions that have been rendered analgesic, and a number of investigations have shown that extremities after having been rendered analgesic by suggestion will bleed less profusely on being pricked. We therefore believe that analgesic suggestions also alter the vasovegetative apparatus, and it is by no means certain as yet that these alterations are limited to the vascular system. It should give pause for thought, at any rate, that pains originating in the organs with smooth muscles are more readily susceptible to influence than pains of other regions. Yet the experimental material available on this point is not sufficiently extensive to justify a general inference. Hypnosis as such may be utilized for the carrying out of minor operations. Profound hypnosis will in general be most expedient in these cases. Dental operations have been repeatedly made under hypnosis. It is not certain that the quite questionable results obtained by such efforts are at all commensurate with the labor expended. At any rate, hypnosis by no means suffices for the carrying out of major operations. Here it may be particularly valuable to use a procedure recently recommended particularly by Friedlander, namely, that of hypnonarcosis; since this method involves not an influencing of the pain in hypnosis, but a support of narcosis by hypnosis, we shall not discuss this subject now, but leave it for later, and shall for the present turn to the attempts to alleviate and remove the pains of childbirth by means of hypnosis. Hallawer makes use of psychic treatment also in support of the narcosis and thus saves narcotics. *Vice versa*, he applies chloroform to facilitate hypnosis.

Attempts to render deliveries painless by means of hypnosis go back to the earliest period of the use of hypnosis. Kogerer has recently reported favorable results. The patients may be put into a hypnotic sleep during labor. After awaking from the hypnotic sleep these patients know nothing of the delivery, they have anne-

sized their delivery. A number of authors fear that this process deprives these women of the experience of birth, and may thus diminish the proper proportion of maternal affection. Kogerer therefore prefers a process in which he suggests only anesthesia during birth, and thus deprives these women only of the pains of birth and not of the experience of birth. From a general standpoint, and disregarding the psychological value of the birth experience for women, we must point out that even experiences in profound hypnosis are a portion of the individual psychic aggregate, and that mothers thus have had the experience of birth even though they amnesize it. This experience may therefore be made perfectly accessible again to the consciousness by means of a repetition of hypnosis. It would be worth while to make such experiments, and it would be of special interest to determine to what extent the pangs of birth would be reëxperienced in such cases. In hypnotic experiments we have repeatedly observed that in the illumination of amnesias, pain stimuli applied during hypnosis to portions of the body that had been rendered analgesic, may frequently be awakened with particular severity. Yet, the general problem of hypnotic analgesia appears to us at present as not sufficiently cleared up, as we do not know the extent of the share of the peripheral influencing and reduction of pain. It is worthy of note, moreover, that almost all the authors who take up the question of freeing from pain in childbirth by means of hypnosis maintain that they have also been able to enhance the functions of labor. In general, an influencing of the pain of women in labor will require a preliminary preparation during pregnancy. It is improbable that any *rapport* between hypnotizer and patient can be established at the pinnacle of labor. The procedure of hypnotic childbirth analgesia and of childbirth in hypnosis is perhaps not capable of very widespread application by reason of the quite detailed preparation required, but is truly worthy of application in specific cases.

It has already been pointed out that hypnosis is not sufficient for the carrying out of major operations, but even here hypnosis may be a useful support to narcosis. Friedlander states that considerable quantities of the narcotic may be saved if the patient has been hypnotized in advance (likewise Hallawer). We consider this statement as quite credible, as it is perfectly in accord with our theoretical convictions with regard to the close interrelation between psychic and physical factors. As it is doubtless of great importance to the patient to limit the amount of the narcotic, it would be

reasonable to demand—assuming the procedure to be likewise expedient—the application of hypnosis in every narcosis. Hyponarcosis is a theoretical counterpart to narcotic hypnosis and appears to us as a reasonable emphasis of a therapeutic principle which may in the future be of great importance not only in the fields of narcotics and hypnotics, but of very general application. We mean the principle that psychic influences may be supported by medical devices, and that, *vice versa,* medicinal and physical influences may be brought to their full effectiveness by psychic means. We here have a prospect of a new important application of a future pharmaco-psychoanalysis. One of the present authors has already repeatedly called attention to this important domain of future investigation.

C. The Treatment of Neurotic Disturbances.

In spite of the important fields of application of hypnotic therapy above indicated, the principal application of hypnosis remains in the field of neurosis. To be sure, it should never be forgotten, as has been repeatedly emphasized, that hypnosis is only a technical auxiliary device in the treatment and is not a complete treatment. The general principles of the treatment of neuroses should not be lost sight of, either, in hypnotic therapy. One of the most important principles is that the patient must always be forced to act against the neurotic symptom. Thus, it is necessary to force the anxiety neurotic into the situation which is productive of anxiety for him. For instance, if there is difficulty in swallowing, the patient must be obliged to partake of precisely that food which causes such difficulties in swallowing, etc. It is almost always erroneous to avoid facing the symptom. Of course, it will not be possible to begin the use of compulsion against the symptom, as a rule, until a certain attachment to the physician has already been attained. Even in psychoanalytic treatments, the principle of active therapy requires a forcing of the patient into the anxiety-arousing situation. The psychoanalyst knows that profoundly buried repressed material will then come to light, which must thereupon be dissolved by analysis. But even in a nonanalytic "active" therapy, the same repressed material will not become tangible to the grasp of the psychotherapeutist until such treatment is begun. Even during a hypnotic treatment, the patient will under certain circumstances have to be removed from his customary environment, although we are of the view that as a rule the importance of a removal from the milieu is overestimated. In our

discussion of the various specific neurotic disturbances, we are not classifying them from the point of view of a scientific system, but are rather considering their distribution according to practical requirements.

1. Actual neuroses. By actual neuroses, Freud means those neuroses which proceed from a direct sexual injury. Their chief characteristic is fear. We may even speak of acute fear neuroses. Even though lack of sexual satisfaction, conditioned by abstinence or by some unsatisfactory forms of sexual intercourse, whether it be *coitus interruptus, condomatus, etc.,* which occupies the foreground, lack of physical satisfaction is not the sole dominant factor. Lack of physical satisfaction will have a pathological effect only if psychic factors are added. The essential point is psycho-sexual-nonsatisfaction, which may to be sure be supported by a physical aspect. This point of view is of great therapeutic importance, since the lack of physical satisfaction, on the one hand, cannot always, for external reasons, be altered, while on the other hand, the attainment of physical satisfaction will not abolish the neurosis unless such attainment has been psychically prepared and thus leads also to psychic satisfaction. Certainly the physician is by no means called upon to drive persons who live in a state of sexual restraint, against their conviction, into the many dangers of extraconjugal sexual intercourse, even disregarding the fact that such relations are for many persons unattainable in a satisfactory form, without further preparation. Even the relinquishing of precautionary measures in conjugal intercourse is very frequently impossible for a number of reasons. On the other hand, it is the physician's duty in all acute conditions of fear, to investigate thoroughly the sexual life of the patients and to discuss it with them. The giving of information, the holding of consultations, are very effective even in cases where the external form of the sexual activity is not altered. No doubt sexual injuries may in some cases be easily removed. We have frequently made the observation that married men do not pay sufficient attention to the sexual satisfaction of their wives, even when potency is adequate, which may be a cause for nervous disturbances. Appropriate instruction must be given here. In general, and particularly in such fear conditions, the constant effort must be to impart to the patient a greater inner freedom on the subject of his own sexuality. Hypnosis in such fear conditions is for the most part merely superficial. But even this superficial hypnosis is quite sufficient and precisely in such cases excellent results may often be obtained if our remaining

principles of hypnotic treatment are observed, wherefore hypnosis is the indicated treatment for such cases. This is of course true only of acute cases. If the entire condition is of long duration the treatment will be more difficult, and in the case of pronounced phobia, such as bridge fear, fear of walking, etc., success may not be expected immediately.

2. Phobias. In this case again it will be necessary to operate with superficial hypnosis and success will be scored if the psychic aggregate be borne in mind, yet in the case of serious situations of long standing, psychoanalysis is the method indicated in advance. Only in exceptional cases will it be possible to apply hypnotic treatment to the severe forms. The patient must be forced again and again into the terrifying situation. If the superficial hypnosis does not suffice, it is justifiable to admit narcotic hypnosis. These principles apply to fear of walking and fear of bridges and other disturbances, as well as the fear of blushing, etc.

3. In *compulsion neuroses,* psychoanalysis wherever feasible under external circumstances, is the indicated method. Success is attained by hypnotic treatment only in very mild cases, and this success is not always permanent. Comparatively favorable for hypnotic treatment are those nonchronic cases of neurosis in which the compulsion neurosis appears in the form of a single symptom, more or less isolated from the remaining psychic contents, and without any pronounced presence of the total picture of compulsive neurotic traits. In a number of such cases of compulsion neurosis in female patients, in whom the absent sexual intercourse had been replaced by the substitute—corresponding to the fundamental sadistic character of the compulsion neurosis—for their inhibited sexual desire of a tendency, manifesting itself as a compulsion, to choke persons in their environment,—we have applied hypnotic treatment with good results and with cures of long duration. Here also, of course, a discussion of the symptoms, according to the regular analytic practice, a retracing of the symptoms to the displaced sexual adjustment, must precede the treatment.

4. Occupational neuroses and tic. For the treatment of tic it is desirable first to recall the method of Brissaud, Meige and Feindel. This method consists in telling the patient to learn to suppress his tic before the mirror. First he is made to suppress the tic before the mirror for a short period only. Such exercises are carried out several times a day and it must be insisted that they be performed successfully, at first only in the short period prescribed.

The period of suppression of the tic before the mirror is thereupon systematically increased. It is particularly important, in this connection, to have the twitching area touched by the fingers of the tiqueur. Only this stimulus to the senses makes possible a perfect concentration of attention on the twitching region. In many mild cases this method is sufficient. In more serious cases hypnosis is the royal remedy; profound hypnosis is absolutely required; particularly effective is narcotic hypnosis. It is desirable to have the tiqueur sleep long and soundly right after the hypnosis, whether it be a narcotic hypnosis or a hypnosis without narcotics. Even in cases which can be reduced to profound hypnosis without the use of narcotics we occasionally employ the latter in order to strengthen the sleep effect. The treatment must of course be continued for some time. Kauders has recorded great improvements even in the tics of post-encephalitics,[1] and temporarily complete cures. We have already stated that in the treatment of organic and neurotic tics, a hypnotic long sleep treatment (combination of hypnosis supported by occasional administering of small doses of narcotics), often permitted to continue for several days, gives good results. A few general remarks are now in place. The view is of course now accepted that the border line between psychogenic and organic Tics is hard to draw (compare on this point Gerstmann and Schilder), and we are justified in assuming a relation between the psychogenic tics[2] and the striopallidal system. The latter appears quite susceptible to psychic approaches. The question therefore arises whether other striopallidal systems may not also be hypnotically susceptible. Thus Reinhold has influenced hypnotically the micrography of post-encephalitic Parkinsonisms, and it is well known that akinesias are also easily influenced by the psychic method. Unfortunately, however, the effect of the psychic treatment in such cases is of but short duration. Obviously the psychic influence is not able to combat the organic disturbance for long. In a case of hypnotic

[1] Many cases of tic and myoclonic contraction of voluntary muscles, during the encephalitic epidemics, were relieved of these affections by hypnotic suggestion.—Trans.

[2] An unusually severe case of generalized tic in girl of nineteen treated a number of years ago with relaxation exercises and mild hypnosis, was so well affected by the treatment that she was subsequently able to perform in an act on the vaudeville stage and earn a very substantial salary. The tic, however, continued as before immediately after leaving the stage.—Trans.

treatment of a post-encephalitic tic observed by Kauders, the complicated tic of the facial muscles first resolved itself into a simple blepharospasm, which finally gave way to a complete cure after further treatment. In a relapse of the tic, only the blepharospasm returned, and even the latter quickly yielded to hypnosis, but never more than temporarily. At any rate, these observations at least suggest that even organic symptoms may be influenced in hypnosis, and that the accessibility to influence in hypnosis may not always be made use of in setting up a differential diagnosis between a functional and an organic disturbance.

Vocational neuroses may be treated according to the same principles that apply to tics. Of course, in the case of writer's cramp we are dealing with a very stubborn complaint, whose successful treatment by means of hypnotic therapy may not be predicated with certainty in advance.

5. *Stammering* is probably to be regarded as belonging, on the whole, to the same category as the tics. Of course, hysterical stammerers must be regarded as a separate class. The latter are easy to influence, while the cases with the typical serious phenomenon of stammering are after all more serious. The phenomena here extend at least in part beyond the striopallidary system. Kronfeld prefers hypnotic therapy to drill exercises. Our own experiences on this point, which are not very numerous, have not been so favorable.

6. *Hysteria* in all its phases is one of the most grateful objects of hypnotic therapy. This is true in the first place of crude motor phenomena whether they be paralysis, astasia, abasia, mutism, aphonia,[1] hysterical contractures. Also, stimulus phenomena such as trembling, convulsions, are usually easy to influence hypnotically. It may perhaps be proper to remark that the general run of war hysterias and traumatic hysterias are as a rule quite primitive and accordingly easily treated with success. But we may not evolve a theory of hysteria in general from these experiences, as has often been done, and make a stereotyped outline for therapeutic procedure. Precisely in the treatment of hysteria it is particularly important to occupy oneself closely with the psychic life of the patients, in the sense described above, and to obtain at least a superficial understanding of the psychic structure of the symptom. Precisely here it

[1]Aphonias are frequently not recognized as of hysterical character and are often severely treated when a mere suggestion or mild hypnosis might instantaneously cure the patient. Recently a physician was so treated by me with immediate recovery of his voice.—Trans.

is very necessary to demand that the therapy be thoroughly individualized. If the physician will observe the guiding lines laid down in our general therapeutic section, he may count not only on excellent temporary successes, but on good permanent cures. A profound hypnosis is by no means necessary for the treatment of hysteria, and it is also not desirable that the profound hypnosis be forced. We have records of cases of hysteria treated in accordance with these principles which have not shown relapses in spite of unfavorable external circumstances. It is self-evident that even in the hypnotic treatment of astasia-abasia, exercises and encouragement must be constantly applied. In difficulties in swallowing, even in such as are combined with cardiospasm,[1] the patient must be obliged to swallow during hypnosis. Once the first success has been attained, improvement will usually proceed rapidly. The procedure with hysterical vomiting is similar. Patients with attacks of hysteria must not only always be forced into the anxiety arousing situation, but must be made to pass through the situation producing this emotion again and again in hypnosis, a procedure which we have also found very useful in other psychogenic disturbances. As we make use of hypnosis for securing modifications in the character, we do not depend entirely on suggestions, which the patient has amnesized, and we consider a treatment, in general, to be terminated only when all the amnesic lacunae have been filled. We rigidly avoid permitting any sections of the treatment to remain amnesic.

During a pathological state, hypnosis is frequently hard to obtain. Sometimes it is possible to cut short pathological states by means of hypnosis. In general, there is no objection to a hypnotic treatment of hysterias with exceptional states. Cases with serious alterations in the character should be treated from the very start by means of the regular technique of analysis. In general, we have had fewer successful results from the use of the cathartic method than from the method of direct influencing.

There are cases in which hypnotic therapy fails and in which psychoanalysis also is not feasible without further effort. These are predominantly cases in which serious paralyses have long been present. Here either violent exercise or the Faradic current will be of assistance. In such treatments, to be sure, we apply pain

[1] Two cases of esophageal stricture of hysterical character in a man and a woman respectively, were only temporarily relieved by superficial hypnosis but their nutrition was decidedly enhanced during the period of treatment.—Trans.

rather in the form of a threat than as an actual application of pain. We permit the latter to operate for a short time only, promising improvement, make the patient exercise at once, and add the remark that if improvement does not result upon this exercise, a further application of pain will be necessary. We do not by any means attempt to force a disappearance of the symptom in a single session, but very frequently administer suggestions referring to the following day, hoping that a favorable further manipulation of this suggestion will take place during sleep. This slight modification is occasionally of value also in the case of suggestion given in hypnosis. Once the symptom has been made to disappear in this somewhat high-handed manner, a rational psychotherapy, the attempt to remold the character, must be applied in full strength. Of course, this method can be used only in the case of crude, externally visible symptoms. Stubborn-organ neurotic symptoms based on hysterical conditions are not so easy to remove, as Kronfeld also points out.

7. *Hypnosis* is as a rule of slight value for purposes of altering and influencing the character. It might at most serve as a transition to the first suggestions, and must not last too long. Here it is necessary to apply psychoanalysis or Adler's "individual psychology." In thus recognizing the practical utility of the "individual psychology" in a number of cases, we are for the present pronouncing no judgment on the content of truth in Adler's doctrine. We cannot investigate this problem here. The above remarks are also equivalent to a statement to the effect that hypnosis may very rarely be applied for pedagogical purposes. Here again, it is very important to secure a swift solution of the attachment to the hypnotizer and to suggest in such manner that the suggestion will not localize externally, but will be woven organically into the general personality.

It is often required of the hypnotizer that he liberate persons from their love-passion, etc. Such an attempt may be justified in advance only on the express desire of the person concerned. But in general it is necessary to guard against any crude interference with the psychic life of the hypnotized. Here again it will be necessary to study the individual psychic life of the person concerned, to seek to uncover the connections of excessive fixation to a person, and very frequently hypnosis as such will turn out to be superfluous. Let us again emphasize the fact that hypnosis remains always a technical auxiliary device of psychotherapy, an auxiliary device of convenient and effective application, but one capable of replacement in many cases by other technical auxiliary devices.

8. Morbid addiction. Forel reports favorable results from hypnosis in the case of alcoholism. So does Haupt. We have had no such experiences. In general, we consider it desirable to secure a liberation from alcoholism by means of external remedies.

We do not consider the attempt to withhold morphine from morphine addicts or cocaine from cocaine addicts by hypnosis alone to be very promising, though it may be successful in individual cases. In general, we consider it necessary to intern the morphine and cocaine addicts for breaking their habit; without attempting an exhaustive treatment of the subject we recommend that the morphine be not withheld suddenly, but in the course of five or six days. Should dangerous symptoms appear, the breaking of the habit must be further retarded. Large doses of veronal during the deprivation, beginning perhaps with the third day, have shown themselves useful. The difficulties due to abstaining from morphine very often react very favorably to hypnosis. The deprivation should always be made easier by means of hypnosis. In general, the addicts are particularly easy to hypnotize after being deprived of the drug, a fact which is theoretically of interest, for recent investigations (Wuth) make it seem probable that a condition of stimulation in the sympathetic-parasympathetic system calls forth the difficulties due to abstinence. The particular accessibility to hypnosis during the abstinence phase fits in very well with our general theoretical views. If hypnosis has been begun within the abstinence phase, it is advisable to continue the hypnotic treatment in order to strengthen the will of the patient to abstinence. An individual study of the causes of the addiction is here also desirable. Of course, according to our experiences, even this procedure by no means assures the addict against recidivity.

We do not consider it desirable to keep the patient in the hospital too long after deprivation, in general three or four weeks appear sufficient, provided the patient can sleep without the aid of narcotics. Deprivation of cocaine in the form of snuff usually results in but slight abstinence pains, yet the danger of relapse is exceedingly great. We have no experience of our own in the breaking of the nicotine habit, but no doubt hypnosis would facilitate such a process. The curing of addicts unquestionably requires a profound hypnosis.

9. For the treatment of perversions, hypnosis is not sufficient in most cases. In so far as psychic treatment may give promise of success at all, psychoanalysis should be used. This holds particularly true of homosexuality. Only Schrenck-Notzing declares that he has had success with hypnosis. We again state that the hypnotherapeutist

should never make it his task to graft any nonorganic conditions on the psychic life of the patient. Under certain circumstances, he will rather renounce possible successes where there is no prospect of securing a balanced psychic life in the patient.

10. The treatment of disturbances of potency is an important subdivision of hypnotic therapy. Vaginal anesthesia in women may in some cases be very favorably influenced by hypnotic treatment; no doubt a number of cases nevertheless resisted such treatment. An investigation of the psychic causes for the vaginal anesthesia should not be neglected. The same applies also to vaginismus. Physical examination is very important, as it frequently reveals anatomical anomalies which render cohabitation difficult or impossible.

Physical examination should also be resorted to in the case of impotence of the male, but in the great majority of cases no local symptoms will be found. Accordingly, local treatment may be applied only as a suggestive remedy. Nor is it advisable to overestimate the importance of organic complaints, in disturbances of potency. No doubt *dystrophia adiposogenitalis,* serious diabetes, serious tabes, or an advanced senium will cause impotence, but even a serious organic complaint very frequently merely results in lower potency, and the symptoms of disturbed potency very frequently depend only on psychic factors. This is particularly true of the disturbed potency of the senile, even in cases of apparently organic disturbances of potency, psychotherapy will frequently yield results. A rational psychotherapy of impotence must of course investigate the psychic causes conditioning the impotence; these may be of very varied nature. Very often a perversion is hidden behind impotence. A primitive infantile sexuality will renounce the normal sexual goal. The disturbances are at times to be sought in the domain of the Oedipus complex, often in more primitive strata. Exhaustive, analytically guided preliminary conversations are necessary in all cases; psychoanalysis is required by serious cases. Mild and medium cases are excellently treated by hypnosis, which need not be very profound. In general, a favorable prognosis is followed by cases in which normal sexual activity has once been present, if only for a short time. More difficult are the cases in which the patient has passed into the thirties without normal sexual activity. If a perversion or a neurosis (fear neurosis!) is at the bottom of the thing, the success of the treatment will depend on influencing the fundamental complaint. In mild cases, such as cases, for instance, which record failures only in the presence of specific objects, let us say, esteemed love-objects, a

rational psychotherapy will usually lead to swift recovery. Recourse to medicaments may offer useful assistance. The fear may be subdued by bromides, but it must be remembered that this remedy, like that of eliminating restrictions by the use of alcohol, is indicated only in mild cases. It is better not to try such means in more serious cases. It is not only permissible, but even desirable, to enhance the psychotherapy by means of hormonal preparations. Yohimbin is sometimes also useful. But it should not be forgotten that all these drugs merely improve the preliminary conditions for the sexual act, but that the main emphasis in the treatment must always be devoted to securing a proper adjustment on the part of the patient, within and without the hypnosis, toward his sexuality. Sexual inhibitions have very often caused male patients to have very erroneous conceptions as to the anatomy of the female genital organs. Object instruction is here often absolutely required. Little technical hints are often of great use to the patient. In many cases the sufferer from ejaculatio precox is recommended to abstain from sexual intercourse. But on the whole it should not be forgotten that abstinence for too long a period is not to be recommended from the point of view of the treatment of impotence. The patient should be forbidden to have sexual intercourse only when it is expected that he will violate the injunction. The conditions for the patient are then favorable in the sense that he is not laboring under the impression of a specific task, a condition always to be avoided. In general, an impotent man is only too much inclined to be dissuaded from attempts at sexual activity. He must then be forced to make such attempts. But we must always bear in mind the fact that a physician may not recommend extraconjugal sexual intercourse to a man unless serious reasons are present, and unless the patient is familiar with the possible consequences. It is inadmissible to permit the patient to marry before his potency has been fully restored. In making these commonplace observations with regard to the treatment of impotence, we have merely desired to point out the insufficiency of a mere mechanical communication of a suggestion in the treatment of impotence. We must again particularly emphasize that hypnosis is only a technical device within the frame of the psychic treatment.

11. Enuresis nocturna may very often be favorably treated by hypnosis. The suggestion may either be formulated in such manner as to train the patient by hypnosis to wake up at regular intervals, or he may be adjusted in such a way as to wake up on feeling the slightest pressure of urine. Not all cases react to hypnotic treatment.

D. Hypnosis in Psychoses

Let us add a few remarks on hypnoses in psychoses, although the hypnosis of psychoses is of theoretical rather than of practical interest. It is self-evident that psychogenic depressions will react to psychic treatment and we need not offer any proof of this fact. But there is no sharp line to be drawn between endogenic and reactive depressions, and it is desirable not to renounce hypnotic treatment even when mild circular disturbances are present. We have not only observed occasional symptomatic pacifications, but also interruptions of the disease, interruptions that were not secure against relapse. If success is attainable, it will probably be observed very soon, and it is not desirable to continue the attempted hypnotic treatment for more than three to five sessions, unless a decisive improvement ensues. In serious melancholias such attempted treatments should not be tried at all. On the whole, we must remember that the hypnotic treatment of depressions promises success only in a small number of cases. The hypnosis usually remains superficial, further profundity should not be forced, since such patients are very frequently refractory even toward narcotic hypnoses.

In schizophrenia and paraphrenia hypnosis should not be applied as a rule. Only those schizophrenia cases constitute an exception which begin with the aspect of neurosis; for the most part other modes of psychotherapy will promise more success here also.[1] In delirious conditions, Kauders has attained striking pacifications and profound slumber by hypnosis, both in delirium tremens and in hyperkinetic encephalitis. This fact, though of interest theoretically, is of slight practical importance. Also, the phenomenon pointed out by Hartmann and Schilder, namely, that far-reaching visual suggestibility is attainable in paralytics with the use of narcotic hypnoses, that the absence of amnesia and motor phenomena is only of theoretical interest.

A general glance backward over our remarks concerning the theoretical utilization of hypnosis will show that we are, of course, not dealing with an infallibly effective magic remedy, but with a very valuable technical auxiliary device which, properly utilized, is entirely without danger. Of course, the hypnotized must not be tormented during hypnosis by more or less senseless experiments, in which case there will be no reason to echo Meynert's statement to the effect that hypnosis is an undignified exhibition.

[1] Breuking reports successes in the treatment of (schizophrene!) psychoses with cathartic hypnosis. But his essay is unfortunately not accessible to us in the original.

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